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BRANCH I.

ORIGINAL COMMUNICATIONS.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

On the Management of Harvest Work.

SIR,

THE harvest quarter is always a busy period with the corn farmer, calling for the utmost exertion of his abilities, and likewise for no small portion of his judgment and attention. At that period, the labour of the season may in some respects be considered as winding up, therefore meriting increased diligence on the part of the cultivator; because an error then committed can scarcely afterwards be rectified, whilst, at the same time, the beneficial consequences of good management in the preceding quarters may in a great measure be sacrificed, if the concluding processes are executed in an imperfect or defective manner.

Reflecting upon these circumstances, I am induced to trouble you with the following desultory remarks on harvest management, thinking they may be of some use to many of your readers. The most superficial observer will acknowledge, with me, that there is much room for improvement in every branch of harvest work, particularly in the neighbourhood of large towns, where, from a full supply of manure, the crops are of the greatest weight and value. It is curious, that the occupiers of inferior soils are generally much more attentive in the processes of reaping and gathering of corn, than their more fortunate neighbours, who are placed upon better lands; though, *prima facie*, it would appear that

the crops of the latter are entitled to receive a greater share of the farmer's notice, being more capable of defraying any increased expense which may thereby be occasioned.

In the *first* place, as wheat is the most valuable grain cultivated by the farmer, the usual processes attendant upon the harvesting of this grain, shall shortly be noticed.

Cutting or reaping.—Wheat ought not, on any account, to be allowed to stand till it is quite ripe; because, independent of the hazard from high winds, much of the grain will shake or drop out when carrying to the stack-yard. In cutting it, the reapers should level their sickles upon the ground, and not take too much at one stroke, otherwise a great part of the straw, and all the straggled heads, will inevitably be lost. Small sheaves are also best, being sooner ready for the stack-yard, and permitting the grain to be more equally dried. Indeed, one length of straw is sufficient for the binding rope; though the most of people use ropes of two lengths, and, what is worse, allow them to be filled to the uttermost extremities. A double rope may be made of a proper length, if well taken up at the neck; but, unless that circumstance is attended to, large sheaves will less or more prevail, even under the eyes of the most active farmer. Another reason may be urged in favour of small sheaves, namely, that they are more easily managed at the stack and in the mill-barn,—circumstances of considerable importance, especially when the grain is to be separated from the straw.

Carting or gathering.—The time required for preparing wheat for the stack-yard, depends entirely upon the kind of weather received at the period in question; but, as a general rule, it is better to give it rather too much than too little field-room; because, though this grain rarely heats, in the way very common with barley and oats, it will, if too soon carted, continue soft and out of condition, till the spring quarter arrives; to the great loss of the owner, if he markets it at an earlier period. If the straw, however, is clean, and the weather dry, wheat will, in general seasons, be ready for stacking in six or eight days after cutting, especially if the stacks are not made of an uncommonly large size. It must be observed, that though large stacks have their defects, yet that many benefits follow from building corn in that manner, providing it is in *keeping* condition. A given quantity is thereby soonest brought into the stack-yard; a larger portion is preserved from atmospherical influence, *i. e.* from wetness, whether proceeding from rain or snow, than when small stacks are built; and less damage is sustained from birds and poultry. Besides, large stacks are covered at a comparative less expense, and in a more durable manner, than practicable with small erections.

Building

Building and covering stacks.—A good builder is a most valuable servant, because much grain may be lost by a negligent one. The first quality of a good builder, is to *hing* (ſlope) the sheaves well; and if this is duly attended to, no stack will suffer damage in the most adverse weather, even though it should be imperfectly covered. Attention to *hinging* the sheaves is necessary from the foundation,—but particularly ſo at the *easing* or intake; becauſe a defect there may ſerve to drown the whole ſtack. Neatneſs in building, is the ſecond quality of a good ſtacker, there being nothing more deſirable about a corn farm than to ſee a well arranged and conſtructed ſtack-yard. For covering the ſtacks, well drawn ſtraw ought to be prepared; though this is now a more difficult matter than formerly, when corn was thraſhed by the flail. The only remedy, when the ſtraw is ſhort or broken, is to thicken the cover; though in this way the ſtack has rarely a neat appearance. Small well-twiſted ropes of tough oat ſtraw ſhould be uſed to lace down the cover; and theſe being applied in the lozening or dam-board faſhion, will ſecure the cover under the ſevereſt tempeſts. If the ropes ſlacken, as they neceſſarily will do when the ſtack is compreſſed, pains ought to be uſed in retying them carefully.

In the *ſecond* place, the harveſting of barley ſhall be conſidered. This grain is more difficult to manage than either wheat or oats, being ſofter in the ſtraw, eaſier *mou burnt*, and altogether unfit for ſtacking, unleſs in a very dry ſtate. In addition to theſe difficulties, graſs ſeeds are generally ſown with barley, which often renders the preſervation of the crop a matter of difficulty, unleſs in ſeaſons uncommonly favourable. Barley ought never to be cut when in a wet ſtate. In the very beſt ſeaſons, field room for a conſiderable time is abſolutely neceſſary; and one good way of bringing it into condition, is, not to tie it when firſt cut, but to leave it looſe, or what is technically called *broadband*, till the part of the ſheaf expoſed to the air has been deprived of the natural moiſture. It is a great improvement, and forwards the winning proceſs, when the ſheaves are turned over previous to being tyed up; but the danger of allowing grain to lye long upon the ground, muſt always be remembered before theſe proceſſes are hazarded. At all events, a regular examination of cut barley, whether on the ground or in the ſheaf, is indiſpenſably called for, if the owner wiſhes to have it harveſted in good condition.

In the *third* place, a few words may be neceſſary with regard to the harveſt management of oats. The fodder of this grain being a valuable article, much care is called for to cut oats in a proper ſtage, that is, when they are neither ſo green as to hurt the value of the perfect article, nor yet ſo ripe as to extract the whole, or even the greateſt part, of the nutritive virtue from the fodder. The

early varieties of oats are apt to ſhed, when allowed to ſtand long uncut; therefore, it is the beſt way to cut them rather a little quick than otherwiſe. Theſe early varieties ought not to be cut wet on any account, becauſe they are very apt to ſprout, which is not nearly ſo much the caſe with the late ſorts, chiefly owing to the advanced period of the ſeaſon when they are reaped. Late oats may be *gaited* in ſafety at any time when the reapers can ſtand the weather. Perhaps this is an excellent practice with all late oats in every diſtrict where they are not completely ripened; ſeeing that, by following it, the ſtack-yard proceſs may be greatly forwarded. In ſtacking either oats or barley, it is of advantage to have a funnel from the open ſide, and to carry an opening up the heart of the ſtack, from the bottom nearly to the top. In this way, foul air is thrown off; and as both oats and barley are apt to be too much compreſſed, conſequently to gather a portion of heat, this will be eaſily diſſipated by the funnel, before it accumulates to any miſchievous extent. It is rarely a ſafe meaſure to build oats or barley into ſuch large ſtacks as wheat, unleſs the ſtraw is particularly dry,—a circumſtance which ſeldom occurs in this northern part of the iſland.

In the *fourth* place, the harveſting of peas and beans may be noticed. In ſome ſeaſons, eſpecially in thoſe where peas and beans take on a ſecond growth, a very long period muſt elapſe, after the cutting proceſs, before they can be carried with ſafety to the ſtack-yard; but, in other ſeaſons, or ſuch as thoſe experienced in the two preceding years, the harveſt proceſs of theſe grains is not tedious, nor accompanied with the ſlighteſt difficulty.

Cutting or reaping.—Beans and peas ought to be as ripe as poſſible before they are cut; otherwiſe they ſhrivel or cling very much, which impairs the quality of the grain, and leſſens its value. They ought to be cut very low, beans in particular, on account both of corn and fodder, and not to be tied into ſheaves, till the ſucculence in the ſtraw is quite exhauſted. When beans are in drills, the correct method is to give every reaper one drill; according to which method, more work will be done than by any other. If ſome peas are amongſt the beans, as is generally the caſe, one man makes ropes of them for ſix or eight reapers, according to the weight of the crop; and, where peas are wanting, ropes of oat-ſtraw are previouſly prepared, and laid down behind the reapers. Great vigilance is called for in the overſeer, ſo as the cut beans may be regularly roped; otherwiſe, the after talk of tying the ſheaves will not be an eaſy one. After lying upon the ſurface for ſix days or ſo, it is cuſtomary to tie and ſtook the ſheaves on end; and in this ſituation beans will ſtand the moſt adverſe weather for a long time, providing regular attention is beſtowed to keep them afoot. Peas are much eaſier damaged than beans;

beans; and the only ſure preſervative is, to make ſheaves of a ſmall ſize; in which way, much injury may be avoided.

Carting or gathering.—The only direction required on this head, is, never to bring either beans or peas into the ſtack-yard, unleſs the natural moiſture of the plant be not only completely evaporated, but alſo that the ſheaves be free from wetneſs of every kind at the time they are carried. If this rule is neglected, the moſt diſaſtrous conſequences will follow, rendering both corn and ſtraw in a manner uſeleſs, and cauſing ſhame and confuſion to the owner; which may always be avoided, by exerciſing attentive management.

Building.—Beans and peas can rarely, except in particular dry ſeaſons, be built into very large ſtacks; nor is it either prudent or neceſſary that they ſhould be ſo built; becauſe a large ſtack, if thraſhed all at once, muſt produce too much fodder at one time, which, of courſe, becomes leſs palateable to the working ſtock. If a ſtack of beans or peas furniſhes ſtraw for two weeks conſumption of the horſes upon the premiſes, it is of a ſuitable ſize; and a ſtack of this ſize will ſeldom be a ſmall one.

With regard to building and covering, what is mentioned reſpecting wheat, is equally applicable to ſtacks of every other grain. It may only be repeated, that a well built and neatly covered ſtack-yard, is the greateſt ornament of a corn farm. Indeed, the corn farmer who is careleſs and indifferent in theſe matters, will uniformly be found defective in other branches of management. Moſt of his other operations are out of ſight, or at leaſt known only to his neareſt neighbours; but his ſtack-yard is expoſed to the inſpection of every viſitor that is about him, and of every perſon who paſſes his doors. Should pride, or, more properly ſpeaking, regard to character, not ſtimulate him to the performance of duty in the one caſe, we may ſafely believe that innumerable duties are neglected or imperfectly executed in the other.

Finally, let me mention, and I do it with much ſatisfaction, that the practice of reaping in a comparatively perfect way, has rapidly ſpread over many of the beſt cultivated diſtricts within theſe few years paſt. To ſober and conſidering men, no circumſtance can appear more wonderful, than to ſee a farmer endeavouring to cultivate and manure well through the ſeaſon, ſo as he might raiſe a good crop, yet that the ſame farmer, at the period of harveſt, when Providence had bleſſed his endeavours, by ſending him a good crop, ſhould allow a parcel of mad people to ruſh upon his fields, and to mangle and haſh them down, without regarding the expenſe of cultivation, or the loſs of corn or ſtraw incurred in conſequence of ſuch madneſs. This is a ſubject which may afterwards be enlarged upon; but, in the mean time, I am, yours, &c. ARATOR.

FOR THE FARMER'S MAGAZINE.

Essay on the Question, 'What is the best Rotation of Crops for light Land (Wheat being one), in a late, and rather a moist Climate?'

> At prius ignotum ferro quam scindimus æquor
> Ventos, et varium cœli prædiscere morem
> Cura sit, ac patrios cultusque habitusque locorum
> Et quid quæque ferat regio, et quid quæque recuset. VIRG.

IN cultivating the ground, two objects ought always to be kept in view: the first is, that there may be obtained from it the greatest quantity of the most valuable produce; the other, that this produce be obtained in such a way as least to exhaust the soil: in other words, that the care of the cultivator, while prompted by an evident interest to the pursuit of present good, be so guided by discretion as not to dry up the sources of future and more lasting advantage. These principles, which bear upon the face of them sufficient evidence of their soundness, are the only basis on which any rational scheme of cropping can be founded. The alternation of white and green crops, which is now sufficiently understood as the leading feature in every judicious rotation, points directly to them both; and it is the clearness of views with respect to them, joined to a suitable practice, as well in the minor details, as in those great outlines, that chiefly distinguishes the active and intelligent husbandman from the merely vegetating slave of indolence and hereditary prejudice. Every thing, here, it must, however, be distinctly understood, depends upon thus going into detail. A mere general acquaintance with the modes of procedure, is nothing, in agriculture. The important part is, to apply the principles that are known, to actually existing cases; and to provide against exigencies that may very readily be overlooked in theory, but of which the real consequence would eventually force itself on the observation; and cannot be undervalued without the most imminent danger. The manner of cropping on particular grounds, will necessarily require to be varied with numerous circumstances of time, place, soil, climate—with diversities as well laid by nature, as founded in the condition of society, which it would be no more prudent to lose sight of, than it would be reasonable in a man beginning to build, to take no account whether he had found a suitable foundation. The question now proposed for consideration, presents a collection of circumstances of this kind; to provide for the meeting of which, without deviating from the general principles of good husbandry, is the object of the following inquiry.

Of various rotations that might be thought of in that view, none

none is perhaps more deserving of attention, than a four-shift course, proceeding thus—

1. Turnips. 2. Barley or oats. 3. Grass. 4. Wheat.

In this course of cropping, short and simple as it is, there seems to be nothing wanting for obtaining the best returns in the given circumstances. If the land has been recently in tillage, or if the way has been opened for the rotation by a previous crop of oats from lea, the proposed course may be entered upon immediately, and with every prospect of success, both because the crops of which it consists are in a happy degree suited to the supposed situation, and as they are made to stand to each other in a relation, upon the whole, also favourable to the general result.

It will not be necessary to prove, that at the foundation of all good husbandry must be placed the thorough cleaning of the land, and the keeping of it in a state as free as possible of weeds. It is equally ascertained of what infinite consequence, for this purpose, is the culture of a turnip crop on all light dry lands. Substitutes for it, in this respect, to a certain extent, it might indeed be possible to find; but there is no crop, with which we are acquainted, from the raising of which, on the description of grounds to which it is applicable, the whole of the same ends are so effectually to be gained, that, on heavier lands, are obtained from the use of naked fallow. While thus, independent of its own particular value, the beneficial effects of a turnip crop extend throughout the whole period of the rotation, it is with particular aptness that the place therein assigned to it is (where that alternation is to be adopted) immediately before a crop of barley. The complete tilth and mellowness of the ground, so properly aimed at in the preparation for that crop, cannot well be procured in a manner nearly so advantageous in any other way, as it may, with a very moderate share of direct expense, merely by being taken after turnip. The operations attending the culture of that valuable root, necessarily induce a degree of pulverization in the soil on which it has been raised, that cannot fail to facilitate very much the formation of a proper bed for the succeeding barley, and which will be far from being useless, should the characteristic circumstances of the situation be in that excess, or should it, from other causes, be rendered necessary, or most proper, to have the turnip succeeded rather by oats. * Though

* A climate, such as that supposed, is undoubtedly far from favourable for the growth of barley. But as the opposing qualities are not understood to be in a degree to prevent the culture of wheat, a kind of grain to which they might appear not less adverse, it was judged

the hardy oat might, without the intervention of this preparatory crop, arrive indeed at maturity, and yield too a considerable return, yet, even for it, the benefit of a previous cleaning of the land is far from problematical, and is especially indispensable in the view of sowing down with grass-seeds, which, in either of the cases alluded to, is the crop next to follow; and it would be a waste of time to show, that, in such an arrangement, there is in any event no want of attention to its interests; it being well understood, that the white crops which have been mentioned are, in the order they stand, precisely the very best and the most suitable stepmothers for grass-seeds. It may also be added, that, from the early period of the season in which grass is usually cut and removed from the field, the most favourable opportunity will be afforded for finishing the sowing of the wheat (which concludes the course), at such a time as to admit of its perfect growth and ripening.

It may be objected to the proposed rotation, that the most valuable crop in it, the wheat, is thrown at the furthest distance from that other crop, the particular object of which is to clean the ground, and, by its meliorating influences, to prepare it for future fertility. The manure bestowed, which, by every rule of good management, will fall to be given in the first place to the turnip crop, will, it may be thought, have so far exhausted itself, ere the following wheat one be put into a situation to be benefited by it, that a considerable deficiency may, in consequence of this, be reckoned upon in the returns. The objection is not without weight. But, on the other hand, it is to be remarked, that the wheat crop, though not immediately succeeding the turnip one, is not placed at any very great distance from it; that it could not, in fact, if sown in autumn, be placed nearer than it is; and that, being divided from it only by one white and one green crop, the prospect of success is sufficiently flattering. The danger is not indeed unknown, to which wheat is liable when succeeding immediately to grass; but the degree of this, it is to be observed, is reduced almost to nothing in the case of grass that is suffered to remain so short a time in the ground; for little, surely, need be apprehended, either from roots, or from the generation of vermin, on the tender lea of such a crop, especially as the second cutting, with the united influence of a hot sun and preparatory cultivation, may be considered as sufficient to correct any incipient bad quality in the ground.

Let

judged unnecessary, on their account, to throw out of view entirely, here, a crop, of which the use might often be convenient, sometimes perhaps highly advantageous.

Let it be recollected, at the same time, that it might be difficult, either by disposing the crops already enumerated in a different order, or by introducing others in addition to them, to form an arrangement that would be on the whole more advantageous than that proposed. If turnips are to enter into the rotation at all, it is quite obvious that they cannot be off the ground so as to admit of an early sowing of wheat. After potatoes, beans, peas, or other green crops that are removed from the fields in the autumn, it is possible that the object here to be had in view might be more nearly effected. But it could seldom happen, that after any, even of these, a crop of wheat could be put into the ground so early as the 20th of September, the period fixed upon as that by which it would be desirable, in the given circumstances, that the wheat should be sown. Various other advantages would at the same time be lost, by the substitution of another in place of the turnip crop. Independent of the high place which this holds as a cleaning crop, it is apparent that the situations are few, in which potatoes could be profitably cultivated to a great extent. Beans are adapted rather to very heavy than to light soils; peas, besides being otherwise precarious, are of very little avail in respect of the melioration of the ground; and, in addition to all, the important uses served by a turnip crop in the feeding of cattle, and consequent increase and improvement of manure, it would not be easy from any other quarter so perfectly to supply.

The same reasons which thus stand in the way of the substitution of any other green crop instead of turnip, in the proposed rotation, appear evidently, though in a smaller degree, to oppose the admission of them into it even by an enlargement of the course. The only considerations that could be supposed to operate in favour of such an extension, being either conveniency, or increased profits; and neither of these, so far as has appeared, seeming very clearly to be gained in the present case,—nay, an increase of difficulty, as one result, being pretty obviously to be thrown by it in the way of adherence to the single point taken here as of almost necessary observation; it is difficult to conceive upon what grounds a cultivator, guided by this rule, could be induced, generally, to make any change of that kind. What would be improper to fix upon as part of an established plan, it is however readily acknowledged may often be very convenient, in conformity with particular occasions, to have recourse to. Such a rigid adherence to system as would exclude the most distinct regard to any circumstance, of whatever kind, that should call for occasional variations, would indicate no great acquaintance

with

with the exigencies of agricultural life, and would be ruinous both to the respectability and the best interests of the profession. A grass crop misgives at some time, let us suppose. The danger of this is probably less, after barley especially, than after any other grain. Still the case may occur; and if it should, what is to be the consequence? Is the entire produce of that season to be lost? Surely not. May not a crop of peas, for instance, rather be taken? and, that as much good as possible may be drawn from a source confessedly bad, if it should appear that, by a mixture of beans in sufficient quantity to support these, the drill system can be advantageously introduced on such an occasion, the benefit of it certainly ought not, and, in proper hands, will not, be lost to the land. Is it required, in like manner (and it generally will be so), that some potatoes should be raised for the family use? Is the want felt, of an additional quantity for the carrying on of stock, in the interval between the end of the turnip crop and the rising of the grass? Or, do adventitious circumstances offer adequate inducement for a still more extended cultivation of them? —the judicious farmer will be at no loss to accommodate himself to such exigencies. In short, the general plan of management is to be considered rather as a rule never entirely to be lost sight of, than as one which must always, in its minutest particular, be servilely obeyed. It is not, that no deviation can ever occur: it will be enough, that these do not violate the principles on which the rule is founded;—that the diverging steps be taken with caution; —and that a path be ever kept open for return.

It will perhaps ere this have occurred, that the occasion will very generally be felt for a departure from the system proposed, more radical than any alluded to. The idea is far from improbable, that nature delights in variety; and that, for obtaining, therefore, from the land the greatest and most valuable produce which it is capable of yielding, it is a circumstance not wholly inept to the purpose, that a change should take place from time to time even among such crops as, in regard to their effects on the soil, may be described as of one character. This, however, it will readily be perceived, is a matter of inferior consideration to a question respecting the extent to which crops of any kind may be taken, without the exhaustion or ruinous deterioration of the ground. That lands naturally of the richest quality, especially if situated in the vicinity of a large town, from which abundance may be drawn of the most fertilizing manure; —that such lands may, for a time almost unlimited, be retained in a state of tillage without becoming unproductive, may be true. But it is still more certain, that this could not be the case on the generality of *light* lands, which neither have those stamina in themselves

themselves of original vigour, and which, in by far the largest proportion of instances, are not situated within the reach of artificial aid. It is true, that, even on the lowest supposition, there will be still to reckon on so much manure as may be produced upon the farm; a resource certainly not inconsiderable; and which, with care in the management highly reasonable to be bestowed, may be so much extended, as to serve with sufficient effect every purpose in a very creditable order of cultivation. It would only be deceiving one's self, however, to imagine, that, in such circumstances, an uninterrupted course of cropping could very long or advantageously be sustained. It would undoubtedly be necessary that the land should at intervals be suffered to rest, and to acquire, from time, that degree of reinvigoration which, in the case supposed, it might be difficult otherwise properly to give. In considering how this melioration is to be effected, it will be necessary to revert to the above stated form of rotation; upon which, as the other incidental strokes, so this feature of greater permanency and importance may, when the occasion requires, be impressed without any considerable difficulty. The change will, in fact, still amount to nothing more than an extension of the course. After the wheat of the last year, the ground, agreeably to the principles laid down, would at all events fall to be occupied, as the two next successive crops, with turnips and barley. This order being then continued just as before, it will only be necessary, instead of grass for cutting, to lay down the second barley with pasture grasses. The land being thus brought into a condition for feeding cattle, it may be retained in that state for such a number of years as are judged sufficient to accomplish the object proposed. It will then be ready to be broken up anew; when the same procedure in every respect may be followed out, as in the first entering on the proposed scheme of rotation.

While, from the remarks thus made, it will have appeared how readily any neceſſary or expedient alteration may be introduced and grafted upon the firſt laid down order of cropping, the inquiry will no doubt have almoſt, in the ſame inſtant, generally preſented itſelf,—With what degree of change, in reſpect of the returns of produce and expenſe of labour, is it to be ſuppoſed that ſuch alteration may commonly be found attended? Or, to ſtate the matter in a way more appropriate to the preſent purpoſe, as in every caſe there will be an expenditure of money, it is in the ordinary courſe of the buſineſs of the world that the deſire ſhould be felt of aſcertaining, in ſome degree, the extent of this, with its proportion to the profits that may afterwards be the reward of its due application. A direction of thought ſo natural and ſo prevalent as this, ſeems to have ſome claim to attention: and

and though it is not concealed from us how much, in diſcuſſions of that ſort, will always belong to the province of conjecture and gratuitous aſſumption, eſpecially where the ſubject is agriculture, it is not to be conceived but that, even here, ſome ſound information relative to ſuch topics may be obtained. During the proſecution of the inquiry, in any event, an opportunity will be found of adverting to the ſteps by which the propoſed rotation can be commodiouſly introduced, as well as of alluding, as may ſeem neceſſary, to any facilities or difficulties, which, during its progreſs, may be expected to ſtand in the way of, or to facilitate ſucceſs.

Suppoſe, then, a perſon entered into poſſeſſion of a farm of a certain definite extent, ſay of about 200 Scots acres. Suppoſe alſo that this land, from former indifferent management, is rather in bad order: and let the ſituation of it, in the firſt inſtance, be conceived ſuch as to give at once a ready market for the ſeveral articles of farm-produce, and an unlimited command of manure for the improvement of the ſoil. In ſuch circumſtances, it will undoubtedly be the firſt object of the cultivator, to bring his lands with the greateſt poſſible expedition into the moſt perfect ſtate of culture;—in other words, to eſtabliſh, throughout the whole of them, without delay, that form of rotation which he ſhall conſider the moſt judicious. A neceſſary conſequence of this will indeed be, a great enlargement of the expenditure within a given time; but the ultimate profit will be proportionably increaſed, ſince the returns will be more ſpeedy, as well as more conſiderable.

The extent to which land may be ſuppoſed deteriorated from previous bad treatment, admits of ſuch an endleſs variety in degree, that to lay down any general ſtandard to come into uſe on every occaſion of this kind, is neither practicable nor to be expected. It will be ſufficient for the preſent purpoſe to conſider a certain proportion of the farm, to the amount, for inſtance, of three fourths of the whole, as in a ſtate of exhauſtion by long continued tillage. The remainder may be ſuppoſed to be in a ſtate leſs worn out; that is, under graſs of ſeveral years old, but overrun with weeds; and in a condition far from deſirable in grounds laid out for paſture. An approved rotation for the whole may be entered upon by the third year, in conſequence of the following preparatory arrangement.

FIELDS.

Years.	A	B	C	D
1.	Oats,	Fallow & Potatoes,	Turnip,	Barley or Oats.
2.	Turnip,	Wheat,	Barley,	Beans.
3.	Barley,	Turnip,	Graſs,	Wheat.

In this order of proceeding, it will be obſerved that the firſt ſtep upon that part of the land in which there are ſtill ſome ſtamina

mina to be wrought upon, is to take from it a crop of oats. The roots of the grafs being in fome degree reduced by that means, the further pulverization of the foil, as well as the cleaning of it, is to be effected by the culture of the fucceeding turnip, which may be regarded as opening upon this portion of the grounds the propofed rotation.

On the fecond divifion, naked fallow and a potatoe crop are to lead the way to wheat. The extent to which thefe former are feverally to be cultivated, may vary probably with different circumftances, unneceffary here to be attended to. Let the proportion of each be eftimated at a half; and let the fuperior value attributed to that part of the wheat coming after the fallow, be fuppofed to compenfate, at leaft in fome fmall degree, the want of a crop in the preceding year.

In the third divifion, the rotation to be purfued is entered on at once; as is alfo, indeed, the cafe in the fourth; only that, in refpect to this latter, the common introductory cleaning crop having been left out, it will be proper, inftead of laying down with grafs, to fubftitute a crop of drilled beans after the barley or oats, with a view to the melioration of the ground.

The ftate of the expenditure, connected with this preparatory procefs, may ftand thus.

First Division.

Charge.				Discharge.			
Culture for three years	L. 375	0	0	50 acres oats, at 13*l.*	L. 650	0	0
Manure for turnip, with cartage	625	0	0	50 do. turnip, at 10*l.*	500	0	0
Seed for the different crops	112	10	0	50 do. barley, at 13*l.*	650	0	0
Rent	600	0	0		L. 1800	0	0
	L. 1712	10	0	Subtract	L. 1712	10	0
				Gain	L. 87	10	0

Second Division.

Charge.				Discharge.			
Culture for three years	L. 375	0	0	25 acres potatoes, at 15*l.*	L. 375	0	0
Manure to be applied in first & third years	937	10	0	50 do. wheat, at do.	750	0	0
Seed	98	15	0	50 do. turnip, at 10*l.*	500	0	0
Rent	600	0	0		L. 1625	0	0
	L. 2011	5	0	—L. 1625=L. 386 : 5 : 0 loss.			

Third

Third Division.

Charge.				Discharge.			
Culture for three years	L. 375	0	0	50 acres turnip, at 10*l.*	L. 500	0	0
Manure for turnips	625	0	0	50 do. barley or oats, at 12*l.*	600	0	0
Seed	111	17	6	50 do. grass at 10*l.*	500	0	0
Rent	600	0	0				
	L. 1711	17	6		L. 1600	0	0

L. 1711 17 6—L. 1600=L. 111 : 17 : 6 loss.

Fourth Division.

Charge.				Discharge.			
Culture for three years	L. 375	0	0	50 acres barley or oats, at 8*l.*	L. 400	0	0
Manure	468	15	0	50 do. beans, at 6*l.*	300	0	0
Seed	204	7	6	50 do. wheat, at 15*l.*	750	0	0
Rent	600	0	0				
	L. 1648	2	6		L. 1450	0	0

L. 1648 2 6—L. 1450=L. 198 : 2 : 6 loss. *

Which

* In forming this estimate, it will be observed that five ploughs are considered to be employed in cultivating the farm, maintained each at an expense of 100*l.* per annum. Some hints as to the manner of calculating this expense will be found in the Farmer's Magazine, vol. I. p. 46., vol. V. p. 9., &c.

The quantity of manure understood to support cropping for four years, is taken at 25 double cart-loads per acre, valued (including cartage) at 10s. per load. When there is to be any difference in respect to the number of years, a proportional allowance must be made in the rate.

The rent is fixed at 4*l.* per annum. The following are the proportions observed as to the quantity and prices of seed. For oats, the rate is 14 pecks, at 24s. per boll; for barley, 12 do., at 30s.; (where these crops are stated to be convertible, the average price is taken); for wheat, 3 firlots, at 40s. per boll; for beans, 5 do., at 24s.; for turnips, 2 lib., at 9d.; for grass, 18 lib. clover at 1s., 1 bushel rye-grass at 3s. 6d.; for potatoes, 2 bolls, at 8s.

The returns are generally rated low, on account of the supposed bad condition of the ground at this period; though, both here and throughout,

Which ſeveral balances being added together, and the deduction made of the gain on the firſt diviſion, the reſult is 608l. 7s., which is the ſum that will be ſunk during the bringing of the land, in the firſt inſtance, into ſuitable condition, and introducing on it the propoſed rotation, even without taking into the account the reward that ſhould neceſſarily be allowed for the riſk incurred in the mean time, and the ſkill and induſtry employed by the farmer, or, without any allotment being made to meet the neceſſary expenſes of his family, his outlays of money, or the various incidental exigencies of the farm. On all theſe grounds, there may well be added the further ſum of 600l., which, with the former, making a total of 1208l. 7s., will, in addition to all the other expenſes annually to occur, remain as a burden to be anſwered by the profits under the propoſed ſyſtem of cropping.

From the above, it appears, that, by expending the ſum of 1200l., or thereby, upon a farm of 200 acres of arable land, capable of carrying turnips, barley, clover and wheat, the whole of it may be brought into a huſbandmanlike condition in the ſhort period of three years. Thoſe concerned muſt judge for themſelves, whether ſuch a rotation is an eligible one or not, under the circumſtances of ſoil, climate, and markets. The rotation may be varied and extended conſiderably; but enough is already ſaid, to ſhow the propriety of adopting ſuch a one as is now recommended. A. M.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

Remarks on various Subjects.

SIR,

As you were pleaſed to inſert ſome trifles I ſent you, (no doubt becauſe, at the time, not provided with better fare), I truſt to a recurrence of the like circumſtance, and hope the following will get a place in your intereſting Miſcellany.

In ſupplement to your correſpondent *Clown of Aberdeenshire*, (No. XXXVI. p. 455.), I recommend broom to the attention of your chemical friends, for the manufacture of drink: it is ſufficiently narcotic, diuretic, and ebriating:—and are not theſe the beſt properties of barley-juice, whether fermented or diſtilled? In proof

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throughout, as it is the value of the growing crops that it is calculated from, this may be estimated rather higher than would have been given by a stranger, in respect of the assistance that may be had in managing them from the servants and horses, whose whole maintenance and wages have been otherwise accounted for.

proof of the one, its powers are aſcertained as a cure for the dropſy. Dr Mead himſelf relates that he cured a dropſical patient by a decoction of broom, after being thrice tapped. For the others, its virtues were well known to every alewife, when in the practice of brewing her own drop of drink; and I doubt not thoſe gentlemen may fall upon means of diſpenſing the eſſence in different pleaſant and portable forms; and perhaps each perſon may be able to carry a ſhort allowance in a corner of his ſnuff or his vinegar-box.

Broom, it is ſaid, was introduced into Galloway about 1650, from Ireland, by Mr Heron of Heron, as a food and ſhelter for ſheep and cattle during the extremity of ſeaſons,—and, I believe, with good effect. Theſe animals certainly eat it; and, beſides ſatisfying hunger, it makes them dizzy, ſtupid and ſleepy; and I apprehend ſome of your readers will be able to vouch with me, that, to be once ſufficiently in this ſtate, is often equal to ſeveral meals.

Now, for that great deſideratum, the uniformity of weights and meaſures, ſo anxiouſly deſired by all, but hitherto an inſurmountable difficulty, I have a cure infallible: But that muſt be a ſecret till I have ſecured my patent;—without this, counties may reſolve, and Parliament legiſlate, *ad infinitum*, in vain. When good neighbours cannot eaſily obtain ſtamped paper for bills and receipts, they muſt make memorandums on plain paper, or perhaps take one another's honeſt words. In like manner, when meaſures ordained are not at hand, people muſt take ſuch as they have.

My ſecret (but you muſt not ſpeak it) is merely to give to every perſon who has an old meaſure, a new one for it, making a glorious bonefire of the caſt ones, which could not exceed 20 or 30,000l.;—6s. a head on our population;—ſurely a bagatelle in the preſent times, when———

What meaſure or weight may be reſolved on, ſeems indifferent, ſo be it is uniform; but, on account of our great and increaſing connexion with England, the Wincheſter buſhel and hundredweight ſeem preferable; and this is already the meaſure in our border counties, as the Engliſh acre is for land; which is agreeable to the expreſs articles of union 1707. Article 17th requires that the ſame weights and meaſures ſhall be uſed through the united kingdom, as then eſtabliſhed in England; but it ſeems requiſite theſe ſhould be ſquare, not round: The ſquare ones will be leſs coſt; and, if well hooped, and bound at the corners with iron, will laſt long, while every one, poſſeſſed of a foot-rule, may be able in a moment to detect impoſition.

Our

Our peat-fuel is frequently ſo difficult to dry, as not to have its full effect. I think it perfectly practicable, at a moderate expenſe, to finiſh the drying on kilns, either in ſmall quantities at a time, or in whole ſtacks. A common kiln-*pot* ſeems all that is neceſſary:—On the ribs of this kiln let one or more courſes of peat be ſet on end; or the ſtack may be finiſhed for winter, adding link to link at pleaſure. Cover with dung, ſo as to let the heat and ſmoke circulate through the whole, and eſcape only at an oppoſite end from the kiln. I incline to think the difference of expenſe for carrying peat dry, and half wet, will more than balance the expenſe of this labour.

The meritorious eſſays of Count Rumford will ſhow the different value of fuel moiſt and dry; and the time will perhaps, ere long, arrive, that many perſons will have even dry peats toaſted regularly before being uſed, as the baker toaſts his wood in the oven the night before it is uſed, or the perſon of taſte toaſts his oaten cake.

All fuel muſt not only be dry and heated, but have a tendency to char, before it burns; as a candle muſt warm and melt before it aſcend into flame.

I beg leave further to notice one glaring vexation, which, to be redreſſed, ſurely requires only to be known to thoſe patriots who have power. It is, that though our intercourſe with Ireland is ſet free from duties on horſes and cattle, we are ſhamefully interrupted with expenſes, cuſtomhouſe-fees, and loſs of time,—while phyſical interruptions are haraſſing enough. Purſuing a ſwindler, I had to pay about 18s. 6d. of fees for leave to embark and diſembark my poney; and, returning late, it became neceſſary that it ſhould remain all night in the hold; and what it ſuffered there, during ſo long a period, in a noxious air, of which no one can conceive the ſeverity who has not witneſſed it, I cannot expreſs. I can only ſay, when it came out, it did not ſeem half its uſual ſize, and was feeble and dejected beyond belief.

With beſt wiſhes, I am, Sir, your very humble ſervant,

Dumfries-ſhire, 18th February, 1809. J. G.

P. S. If you pleaſe, you may add, to what you ſaid of Rob Roy, the following anecdote, which was communicated by Maxwell of Straquhan to the miniſter of his pariſh, about the year 1767. Maxwell had joined Roy at the time a price was ſet on his head, and a party of the military were in ſearch of him.

One time, Roy, Maxwell, and others, were quaffing whiſky in the parlour of a Highland ſheiling;—in comes the officer and his party. The officer, on invitation, joined Roy; and the ſoldiers went into the kitchen. The officer proclaimed, of courſe, the wicked actions of Roy, and how much he would give for a ſight of him. Roy added to the officer's ſtatement, and ſaid, as he was lately in ſuch a place, very near, he thought it poſſible the officer

might be gratified. Roy obſerved that, when the ſoldiers went into the kitchen, they left their muſkets out-ſide the door. After a while, ſlipping out, he gave a ſignal; and his party came—ſeized the arms—and made the officer and party priſoners. This was a ſtory of an hour long, when detailed by Maxwell; but, as the perſon who heard it is now of very advanced age, he recollects no more.

If any of your correſpondents could give a conciſe account of Roy, or the heireſs

He ſtole from the Border,
To keep his houſe in order;

the trial, &c. with dates; I am perſuaded it would be intereſting to many of your readers—as would a general account of his clan, the Macgregors. *

Cowal was one of his centres; and I have reaſon to believe the ſong might there be obtained, beſides information relating to theſe marauders,—black-mail oppreſſors of all within their reach, whether they cultivated the ſtubborn glebe, or lived by their flocks and herds. We are almoſt as deſirous to be acquainted with thoſe devils who oppoſed agriculture, as with thoſe better angels who promoted it. J. G.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

SIR,

IT is now univerſally acknowledged, that good roads are eſſentially neceſſary for the improvement of any country; therefore, as it may amuſe, nay, perhaps, inſtruct, in ſome points, many of your numerous ſubſcribers, I ſhall, without further apology, offer you an extract of a curious old pamphlet, entitled,

'PROFIT, CONVENIENCY AND PLEASURE,
TO THE WHOLE NATION,
Being
A Rational Diſcourſe lately preſented to his Majeſty,
Concerning
The High-Ways of England.
By THOMAS MACE,
One of the Clarks of Trinity-Colledge Chappel, in Cambridge.

'To mend high-ways, loe, here the way is ſhewn;
No better way than this, ſhall e're be known:
A firm and certain way, of no great coſt;
In all wayes elſe, their labour's wholly loſt.
The old way we're could do't, 'twas meer deceit,
As may be prov'd it was a very cheat.

'Printed for the public good, in the year 1675.

'The

* The trial here alluded to, is pretty fully detailed in the Scots Magazine for July 1752. From it, the ſtate of ſociety in this country, at the time, may be tolerably well aſcertained. N.

'*The Order of the Work in Three Considerations.*

'*First*, That all high-roads might be reduced into two coach or cart tracts, allowing convenient ſpace between, which (if thoſe two might be certainly kept firm and good) would be ſufficient for all ſervices and occaſions of travel whatever.

'*Secondly*, That thoſe two tracts be drawn ſo ſtraight as the ſituation of the ground will afford all allong, for ſeveral good reaſons.

'*Thirdly*, I moſt humbly conceive, it might be extremely neceſſary, that (after this two tracts are perfectly compleated) there was a law made for travellers to ſome ſuch purpoſe as this, viz.

'That all travellers, either with coach, waggon, wain, cart, or horſe, coming to the city of London, ſhall keep in the right-hand tract, coming.

'And in their going from the city of London, ſhall likewiſe keep in the right-hand going, viz. on the contrary.

'The benefits and conveniences of theſe three conſiderations will be infinite and unconceivable.

'If there were a ſmart law made, to keep all irregular troubleſom perſons in an orderly way of civility in their travel; and alſo that their puniſhment might be almoſt ſo quick and ſure, as their affront and injury given; then, without doubt, all quarrellings and diſturbances, which in that nature are daily committed in contending for the way, (which too often proves mortal, or of very bad conſequence to many), muſt needs ceaſe.

'Beſides, there is another very great benefit by this law, which is, that no man ſhould be peſtered by giving the way (ſometimes) to hundreds of pack-horſes, panniers, whifflers, coaches, waggons, wains, carts, or whatſoever others, which continually are very grievous to weary and loaden travellers; but more eſpecially near the city, and upon a market-day, a man having travell'd a long and tedious journey, his horſe well nigh ſpent, ſhall ſometimes be compell'd to croſs out of his way twenty times in one mile's riding, by the irregularity and peeviſh croſſneſs of ſuch like whifflers and market-women; yea, although their panniers be clearly empty, they will ſtoutly contend for the way with weary travellers, be they never ſo many, or almoſt of what quality ſoever.

'Who if by ſuch a law were ordered all of them to keep in one tract or way, (which they might ſo well do, as not, and no inconvenience to any one of them in the leaſt), I ſay, what an ineſtimable benefit might all travellers enjoy by ſuch a law? which could be prejudicial to no man, nor to the leaſt occaſion of poſt-haſt-buſineſs, but an aſſured furtherance.

'For, if the ways were but thus kept certainly firm, clean,

and good; if any man had a mind to travel faſter than that perſon which is juſt before him, how readily and ſafely might he ſtep out of the way, and paſs him by; and ſo as readily ſtep into the tract again at pleaſure, without the leaſt danger of deep cart-ruts, or ſuch unreaſonable high ridges, which now are not poſſible (in many places) to be paſſed over, without meniſeſt danger both to man and horſe.

'Nay, I have often known many travellers, and myſelf very often, to have been neceſſitated to ſtand ſtock-ſtill behind a ſtanding cart or waggon, in moſt beaſtly and unſufferable deep wet ways, to the great endangering of our horſes, and neglect of important buſineſs; nor durſt we adventure to ſtir, (for moſt imminent danger of thoſe deep rutts, and unreaſonable high ridges), till it has pleas'd good Mr Carter to jog on, which we have taken very kindly.

'The great neceſſity therefore of ſuch a law, I do conceive, will be moſt deſirable and gratefull to all travellers, who ſhall thus be aſſured to travel in peace, ſafety and quietneſs; ſo that, in his never-ſo-long a journey, he ſhall not once be diſturb'd or put out of his way.

'Beſides many other pleaſures and conveniences, which I ſhall forbear to mention, but leave them to travellers to diſcourſe upon, when this moſt happy day ſhall ſhew itſelf; that then the high-ways, and the law for travellers, ſhall make all this (and much more) complete, gratefull, and ſatisfactory.

'*The Order of the Law.*

'And as to the order of this law of travellers, if any perſon ſhall happen to be in the contrary way, it ſhall be his part to go out of it, and give way to his oppoſite, or otherwiſe he may be compelled.

'But if any one ſhall be quarrelſome, and oppoſe, or force any other traveller (who is in his right-hand lawfull way) out of it, or injure him upon that account:

'Then that perſon ſo oppoſed, forced, hindred, or grieved, (upon juſt complaint and proof made to the next juſtice of peace, conſtable, or head-officer of the very next town), ſhall have his caſe immediately heard and adjudged, according to the truth of the evidence; and that the perſon ſo offending ſhall immediatly forfeit, and be compelled to pay ſo much to the party grieved or injured, and ſo much to the poor of that pariſh where the caſe is tried: Or, for want of ſuch payment, his horſe may be diſtrained upon till ſuch payment be made.

'*Lastly*, As to the more eaſy effecting of the buſineſs, it cannot but be thought much more feaſible, to maintain only two tracts, which ſhall conſtantly lie ſtraight, and as it were in a line, than to

mend

mend and maintain ways which lie croſs, intricate and confounded, as moſt of our ways throughout England do.

'In the mending of which there is ſuch ſtrange irregularity, by the common menders, that they (in a manner) loſe the greateſt part of their gravel or ſtones; now laying one load here, and then another quite croſs, five or ſix cart-ways aſide, and in a contrary tract; whereas, if there were but only two cart-tracts, they might, with far leſs trouble and coſt, but infinitely more eaſily and effectually be mended, and moſt certainly be for ever maintained; and with a reaſonable charge: As here following, moſt plainly, I ſhall make appear.

'The manner and means by which this ſo needful and profitable work may moſt certainly be effected, with much eaſe, and no great coſt.

'In all humility ſhewing,

'That your Majeſties wayes are not only unpleaſant, cumberſome, and grievous, but alſo very dangerous to the lives and limbs, both of men and horſes, is obvious and apparent to all travellers.

'And in that it has been, and is ſtill judg'd impoſſible to have them bettered, and to continue them ſo, is ſtill the greater grief.

'The conſideration of which, has been an occaſion unto me to exerciſe my thoughts ſo far upon the matter, as thus to conclude, and affirm the contrary, viz.

'That it is not impoſſible, but very feaſible and eaſie, both to have them well mended, and to continue them ſo for ever.

'Yet I muſt needs ſay, that according to the old, common and general way of mending them, it is abſolutly impoſſible, yea, although there were an hundred times the coſt and pains beſtowed on them, as is yearly beſtowed.

'My reaſon is this; becauſe the matter (viz. the coſt and pains) is not ſo much conſiderable, as the manner and order of doeing it.

'The way of doeing is the only thing,
Which here preſents itſelf unto the King.

'Now, as to a more particular explanation, it is to be conſidered, what, and how many cauſes there are of the badneſs of theſe ways: And they are chiefly four.

'*1ſt*, Mire, ſlime, or dirt.

'*2dly*, Deep cart-rutts with their high-ridges.

'*3dly*, Unevenneſſes and holes.

'*4thly*, and *lastly*, looſe ſtones.

'Theſe four things being rectified, your ways muſt needs be good.

'The firſt thing therefore to be done, (which was never neglected by the old way), is to cleanſe the ways thoroughly from dirt, before any gravel or ſtones be laid on.

'Likewiſe all the cart-rutts to be cut down, and carried quite away; they being only the ſlime, greaſe, or (as I may better ſay) the very oyl expreſſed, by the continual grinding and ſqueezing of the cart-wheels, which (according to the old way of mending) were ſeldom or never taken away, but only beat down, and put into thoſe deep holes, and cart-rutts; which, with ſome ſmall ſprinkling of gravel, in ſome places only, or a few ſtones, or baſe ill-favour'd rubbiſh; and all this (very diſorderly and confuſedly) was the principal and conſtant way of mending the high-ways. And thus were they concluded to be well mended; but indeed were made worſe thereby.

'For, ſo ſoon as the great glut of rain comes, the cart-wheels having made way for its reception, inſtead of being hard and firm ground, (which it ought to be), it becomes a quag, or a bog. And this is one main cauſe of the badneſs of our high-ways, in reference to the two firſt inconveniences, viz. mire, ſlime, or dirt, with deep cart-rutts and ridges.

'Now, if theſe two were firſt rectified, as I have declared, viz. taken quite away, the other two might with much eaſe be amended, as here I ſhall declare.

'For example,—

'Firſt, then, let it be ſuppos'd that the ways are thus prepared, ſo that there were neither dirt, nor the ſlime or greaſe of the cart-wheels; and that I might plainly ſee all theſe deep-holes and unevenneſſes, I would not doubt but very well to mend them all, both tolerably and ſufficiently, without the coſt of one load of ſtones or gravel; only by this means, viz.

'Let but my labourers cut down with their mattocks, all theſe adjoyning unevenneſſes, (which are good ſtones and gravel in moſt places, only ill laid), and fill up theſe holes with the ſame.

'Thus only ſhall the ways be ten times better than they were, and firm enough for preſent and future uſe, if they might be always ſo kept clean.

'For the ways, if the dirt were taken off, would in a great meaſure mend themſelves, with a very little looking to.

'Yet I would not be miſtaken, as if I did intend no other mending but this. No. This is but to ſhew how (without the coſt of any new gravel or ſtones, &c.) the ways may be made far better than they are, or ever will be, by all the labour and coſt they uſually beſtow upon them time after time.

'But now, after this thorough cleanſing (and not before), I would have all theſe hollowneſſes fill'd up with the beſt gravel or ſtones that poſſibly can be got for that purpoſe; and where there is urgent need, ſome wood, but not much.

'For ſtill I believe (by the way which I ſhall direct for the constant

constant care in looking after the ways, when they are once truly mended) if there were neither wood, stones, nor gravel, but only good hard earth (nay plow'd lands themselves) the ways could not possibly be very bad at all; no not in the depth of winter.

'Tis only want of diligence and care,
Which causeth wayes to be out of repair;
And as they'r daily gall'd with wearing,
So must be daily fill'd with good repairing.
This is the only way, no way but this;
And thus a fool may mend all what's amiss
With ease, when once he's shew'd but how; he'l then
Become as wise in this, as wiser men.

'However this may seem a riddle, and impossible; yet I doubt not but plainly to make it appear most true and feasible, when I come to give my directions for their perpetual maintenance, which very suddenly I shall fall upon.

'There is one thing more very considerable in this work, which is, the rounding and heightning the ways in all places where possibly they may be so ordered, the better to keep off the water, which is the great corrupter of all high-ways.

'And to this purpose, care ought to be taken to divert all drains, which usually issue down upon high-ways, and to find them some other passage, if possible.

'Many other curiosities and circumstances there are, as to the compleate and exact performance in this work, too tedious here to be inserted: but they must be left to the wit and discration of the ingenuous undertaker, in the time of the operation, as need shall require.

'Thus far towards mending: Now for maintaining.

'*The certain way to keep and maintain the High-ways firm and good for ever.*

'I will first suppose, that the ways are thus regulated, cleansed, and firmly once mended, according to the order prescribed; and that two days have passed since this work was done.

'Now in these two dayes time, there are pretty deep cart-rutts made again, but in twice two dayes, much more deep; and in a week or fortnight's time, so deep, and with high ridges, that it will occasion a horse to stumble in going across.

'This is the first beginning, and the chiefest cause of the ruine of all high-ways.

'How easily might this be mended, if there were appointed but a labouring man daily to look after them; so far as he might well walk in one day, and back again, with his shovel or rake in his hand, and only be carefull but to turn those little ridges into the cart-rutts again; and the work were done.

'And then again the next day; and so day after day, all the year throughout:

throughout: In which work, he should not suffer so much as one loose stone to lye or continue in either of the horse tracts, to stumble or fall; and in this posture might one man keep his 5, 6, 7, 8, or 10 miles firm, perfect and good, all the year long.

The order of the Day-man, and his constant Work.

'First having his station or allotment given him; how far, or how many miles he is to take into his charge and care, (which may, and must be more or less, according to the goodness or badness of the nature of the ground); I say, he having once settled, and entered upon his undertaking, he shall then, every working day, be up, and upon the high-ways at working time, summer and winter, either with mattock, shovel, rake, scoop, wood-bill, wheelbarrow, or what other tool or implements may be thought needfull for such a work.

'And thus shall he walk and work from morning to night.

'First he shall work half his station one way, for two or three days forewards and backwards, and perform whatever may be most needfull for his days-work there.

'Then the next two or three days, he shall do the like to his other half station, the other way.

'So that once in a week's time, shall his whole allotment be constantly amended: And I suppose one man may look after ten miles very well, in most ordinary good soyls.

'So that by this rule, ten men shall constantly keep one hundred of miles perfect and firm the whole year; which cannot be esteemed a great charge.

'But I suppose it may be objected thus, (and truly), That in some grounds, one man cannot possibly manage ten miles, by reason of the badness of the soyl, &c.

'I answer thus: Then let him (notwithstanding) manage so far as he can, in this manner: Although it be but five miles, viz. his two miles and a half one way in two or three days, and his two miles and a half the other way, next two or three days, more or less, as shall be found by experience fit.

'And if quite through the land the work would require such a charge as this, viz. one day-man for every five miles, what could that signifie?

'Nothing—in reference to so great a benefit to all travellers, and a general good to the whole nation, as I shall declare; therefore ought not to be repined at.

'Yet I am very confident, that in most places, (and but very few excepted), that one man may very well keep ten miles tollerably well, in almost the worst soyls; yet it must be granted, that those worst grounds can never be kept so sprucely fine (or garden like) as may those other sandy or gravelly soyls.

'However, it may most easily be conceived, that the constant attendance

tendance of a continual day-man, must necessarly keep the very worst of ways so, that they shall absolutly be free from those gross and common annoyances, and most grievous inconveniences, which we find by daily and wofull experience.

'Therefore, I say, let the cost be what it will, that should not deterr us from putting it into practice or tryal. Yet, I believe, I am much about the matter in respect of the charge.

'I am likewise very confident, that after the first thorough cleansing and amending, the ordinary statutable yearly charge, viz. every man's six days work, &c. will suffice; together with those other provisions already design'd and allowed to that purpose.

'Yet, if I be a little out in this, I hope I shall be excus'd when it shall be consider'd, that I am not out in the grand cast of the design.

'But at the first there must be some way found out for more than ordinary charge, to have them once firmly done; and, after that, these constant labouring men shall keep them ever so, at a small expence.

The Conclusion, and very Life of the Business.

'But, *first*, I would have no common overseers imployed in this work: For,

'By their great wisdoms, and their oversight,
'They ne're could see to mend the ways aright.

'Therefore it is most necessary, that for every hundred or two hundred miles, (more or less, as may be thought fit,) there be one surveyor general; some active-trusty-honest man, who should constantly be on horse-back himself, or his most faithfull trustees, riding upon his station, day after day, to see that the day-men-labourers truly acted their parts, according to their orders given.

'And in case of neglect of their parts, in any of these least punctilio's, viz. as to suffer any deep dirt to lye in the horse-track, loose stones, (the great undoer of horses, and most constant occasion of falls,) uneven little knubs, or any holes or cart-rutts unamended, or any other neglect.

'Then he shall have power (at his discration) to punish such labourers by stoping some part of their wages, or by putting them out of that so constant, good, and very easie imployment, and to elect others in their places.

'Which thing will cause them be daily carefull and dilligent; and without such an exact-continual-daily-constant-strictness, and such severity, by sush faithfull and choice persons, (who will not take an office for any end, so much, as to be active, and to see their business well performed), the work will not be done; but otherwise it may, with the greatest ease and pleasure imaginable.'

Having

Having thus furnished you with an extract from this curious and rare work, I may, perhaps, at another time, notice some of the particulars therein communicated. Suffice it to say, at this time, that all improvement is not of modern date, and that many parts of the *Rational Discourse*, presented to Charles II. by Mr Mace, might be carried into execution at the present day, to the great benefit of the public roads, and to the comfort and safety of those who travelled upon them. I am yours, &c. J. F. E.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

Observations relative to Flax.

SIR,

HAPPENING to take up an old newspaper the other day by accident, (the Courier of the 17th October last), I met with the following observations relative to flax. As I have just begun to cultivate some, (for you must know I am but a very young farmer), and never having met with, in any author, the mode of treatment therein recommended, I should wish much to be informed, through the medium of some of your correspondents acquainted with the cultivation and management of flax, how far it would be safe to adopt the mode pointed out, as there are frequently hints on different subjects suggested in this way, more ingenious than practically useful. Begging your insertion of this when convenient,

I subscribe myself, Sir, your very humble servant,
Perthshire, May 1809. C. R.

'*Flax.*—The exposure of flax or hemp to the frost or snow, 'materially facilitates the dressing of it, by destroying the glu-'tinous matter which unites the fibres; and it is now establish-'ed, that keeping these plants a second winter, will reduce, by 'one half, the labour which will attend the dressing of them the 'first year. It is recommended, that, after steeping, the plants 'be either spread to the action of the frost and air, or placed in 'bundles, on their ends, and left in that state till the spring: the 'better they are dried, the less will be the waste in dressing.'

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

On Peat-Ashes.

SIR,

IN the county of Bedford (at Flitwick), peat-ashes are sold as manure, and are used as a top dressing for clovers, and sometimes for

for barley, at the rate of from 40 to 60 Winchester bushels per acre. They are usually spread during the month of March on clover; and on the surface of the barley lands after the seed is sown. Peat-ashes are also admirably useful as manure for turnips, and are easily drilled with or over the seed, by means of a drill-box connected with a loaded cart.

The crumbs or morsels of peat which break from the spadefuls, are carefully preserved at the places alluded to, and are sold for the same purposes as peat-ashes. But, of peat thus pulverized, a larger quantity per acre is used than of ashes. The method of burning peat into ashes, is nearly as follows.

After the quantity required has been cast, a portion sufficient to kindle a large heap (suppose two cart-loads) is dried, as much as if intended for winter's use. A conical pile is then built and fired; and, as soon as the flame or smoke makes its appearance at any of the crevices, it is kept back by fresh peat, just sufficiently dry to be free from water; and thus the pile is continually increased, until it has burnt thirty or forty loads, or as much more as may be required. The slower the process the better; but, in case of too languid a consumption, the heap should be stirred by a stick, whenever the danger of extinction seems probable.

In case of rain, the workman should be prepared with some coarse thick turf, with which to cover the surface of the cone.

Perhaps the information now given may be satisfactory to A. B. (see p. 177, No. 34. of the Farmer's Magazine). I am, &c.

A FRIEND.

FOR THE FARMER'S MAGAZINE.

On the Use of Soap-Makers' Waste Ashes, commonly called Soapers' Waste, as a Manure. Drawn up by Order of the BOARD OF AGRICULTURE, *and published by its Direction.*

Introduction.—The Board of Agriculture having found, upon inquiry, that the produce of soapmakers' waste ashes, in London and its immediate neighbourhood alone, amounts to above 20,000 tons *per annum*, and is likely to increase, more especially from the use of kelp having been lately introduced into the London market, which furnishes a greater quantity of refuse ashes; and being convinced, from the most accurate information, and the experience of many of its members, that this quantity of valuable manure, if brought into more general use than has hitherto been the case, would be an object of considerable importance to the national agriculture, are desirous of giving all the publicity possible

possible to a circumstance so well deserving the attention of farmers, gardeners, hop-planters, nurserymen and others employed in the cultivation of the soil, more especially those in the neighbourhood of the metropolis, and on the borders of the navigations therewith connected; and, with that view, have resolved to circulate the following observations, collected from the best information which it has hitherto been in the power of the Board to obtain.

Sort of Ash.—The great distinction to be found in soap-ashes, depends upon the sort of alkaline salt used by the soap-boiler. When kelp and barilla are the materials, the ashes are found to be more than twice as strong and effective as a manure, than such as are the refuse of common potash; and to this circumstance may be attributed, not only the different quantities per acre that are recommended, but also the different results which have attended the use of this dressing in different parts of the kingdom, and any failures which may have taken place. The ashes to be procured at London are all made from barilla and kelp.

Analysis.—Mr Davy analysed two specimens of soapers' waste (sent him by Mr Hawes), in the Laboratory of the Royal Institution, and the following was the result.

The waste from barilla gave, in 100 parts,—

Of carbonate of lime, about	76	Tot. calcareous matter,	91 parts.
Of quick-lime, about -	15		
Of gypsum, about - - - - - - - - - - - - -			5
Of common salt - - - - - - - - - - - - - -			1½
Of carbonate of soda - - - - - - - - - - - -			1½

The waste from kelp, in 100 parts, gave about 94 of calcareous matter, in the same state as that from barilla; about three of gypsum, and one and a half of soluble saline matter, containing, apparently, nearly the same proportions of carbonate of soda, and of common salt, as in the former instance.

It is obvious, from the chemical nature of soapers' waste, that it will be applicable wherever calcareous matter is wanted in lands, and that it will serve the purposes of liming.

The small quantity of alkaline salt and of gypsum that it contains, will likewise render it much superior to common calcareous matter, as a top-dressing for every kind of grass.

It seems probable, that these ashes will be found of most benefit on soils that abound largely with undecomposed vegetable substances, upon which the alkaline salt will act powerfully. Charcoal also, wherever found, may be rendered miscible with water, which will produce a considerable effect. The ashes proving highly beneficial on peat-moss, and on low spongy meadows, seems to be a confirmation of this fact. On calcareous soils they may not produce an equal result, as one third of the mass of these

ashes

ashes is composed of lime. They can scarcely be recommended on dry burning sands.

Such farmers as are in the habit of making composts, will probably use these ashes as a material in forming the heaps; and, so far as earth is concerned, there can be no objection to the practice; but, in respect of dung, it may admit a doubt. In proportion to the quantity of alkaline matter left in the ashes, it will tend to shorten the duration of the effect of the dung; and as the addition of ashes will render stirring and mixing necessary, it merits consideration, whether the better system be not to use these manures separately. It seems adviseable, in the application of these ashes to arable crops, to sow and harrow them in previously to sowing the seed, which will prevent the action of any acrid or caustic quality on the germination of the young plants. The same circumstance will point out the autumn as the proper season for applying them on grass lands, though experiments may be tried with them early in spring. Mr Hawes, from the information which he has received, particularly from Liverpool, where they are eagerly sought after, states, that they are mixed with pond, ditch, and river mud, and used in about four months. This also agrees with the practice of Robert Thornton, Esq. of Clapham, who has used them about four years, and has thereby greatly improved a very sour pasture. In Cheshire they plough them into the land; but an Essex farmer remarks, that these ashes are of so heavy a quality, that the tillage should be shallow.

Effect.—In Surrey, these ashes have been found infallibly to kill insects, (*Malcolm's Comp.* vol. ii. p. 173.) The effect of these ashes admirable both on grass and arable (*Adam's Essays on Agriculture*, vol. i. p. 167.) Destroys slugs and vermin of every description (*Museum Rusticum.*) Mr Mansfield, near Epping, on a poor sour pasture that would not mow, nor would stock eat it, four waggon-loads per acre effected a total change; soil strong, wet, and heavy (*Essex Rep.* vol. ii. p. 246.) Mr Sherwood, of Abbots-Langley, Herts, has used these ashes with very great success mixt in composts. They are very serviceable in new plantations, particularly where the soil is cold. A Noble Lord, a member of the Board of Agriculture, possesses a grass field in Wiltshire, which was manured with soap-ashes near twenty years ago, and the improvement was very great, and has continued so ever since. Two principal farmers near Ealing, Mr Thorne and Mr Knivett, have used them for many years for arable land, with great success and advantage. Robert Thornton, Esq. of Clapham, in some experiments amounting to seven acres, found that these ashes added a load of hay per acre to the crop. The Marquis of Abercorn's bailiff says, his father always considered one load of soap-

soap-ashes equal to five loads of rotten dung, and particularly improved the soil and verdure. The Reverend Mr Dudley formed, in Essex, composts of these ashes with marsh banks, which were mixed well together, and spread on grass land with great effect. Hence there is considerable reason for believing, that there is scarcely a manure to be procured, that will be found so profitable (price considered) as these ashes, and that the farmers in the vicinity of London, and of all the navigations leading from it, may embark largely in the use of this manure, without the smallest apprehension of loss by so doing; but that, on the contrary, they will find the profit decidedly great, and, by the use of them, may prevent the continual advance of all sorts of manure. Barges bringing lime, chalk, timber, bricks, malt, and corn to London, can get a freight back at twelve hours' notice.

Conclusion.—It is evident, from the preceding observations, that the use of soapers' waste is well known in various parts of the kingdom; but as the quantity of this valuable manure is likely considerably to increase, owing to the more extended use of kelp in the soap manufacture, it would be desirable to have the following particulars ascertained, in a more satisfactory manner than hitherto has been the case.

1. The soils and the crops for which this manure is best calculated?

2. The quantity that should be laid on each per acre?

3. The proper period of the year for laying it on?

4. Whether any mixture should be used with soapers' waste—what is the best mixture—and the best proportions?

5. What are the effects of this article compared with other manures, and its relative value?

Any information regarding these particulars, transmitted to the Board of Agriculture, 32, Sackville Street, London, will be particularly acceptable.

N. B. These ashes may be had by applying to Mr JOHN TROTTER, Dunbar, or Mr THOMAS PATERSON, Prestonpans.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

On Manures.

SIR,

THE following remarks are on an important subject, and, if they can, with propriety, be inserted in your useful miscellany, I am convinced they will do some general good, both to agriculture and to the community at large.

No article in husbandry and gardening is of more consequence than manure. The labours of the cultivator, and the researches of the naturalist, are more or less advantageous to a district, according

ing as abundant supplies of manure can or cannot be obtained. The sources whence this substance can be drawn are limited by nature, and by various circumstances. The chief supply is from cattle; but as it is impossible to maintain a quantity of these commensurate with the improvements by which husbandry could otherwise be advanced, manure is evidently a most important *desideratum* in every district.

The process of nature in preserving the balance betwixt animal and vegetable existences, is wonderful. The former inhale the effluvia with grateful and salutary sensations, which the latter throw off; and they derive health as well as nourishment from their productions. The latter receive their support and their salutary influence from the exuviæ of the former, and are more or less vigorous according as abundance of these are supplied. To both classes of existences it is an advantage to be relieved of their fruits; and to both, culture and cleanliness are peculiarly salutary.

But this invaluable species of manure is, to our fastidious sensations, so loathsome, that we as speedily as possible banish it from our sight. When men were scattered over extensive fields, this was natural and useful; but, when closely penned together in cities, the same art that preserves them there, and regulates the motion of all their natural propensities, must be exercised in relieving them from this disagreeable feeling. As things are managed in this and in most other large cities, human exuviæ are indeed put out of sight, but that is all; for nearly their whole substance is decomposed in the atmosphere which we breathe; and the remainder, after attaining its last degree of loathsomeness, is deliberately carried under our noses to that situation where alone it can be got quit of altogether.

From the process we observe going forward in the country, in church-yards and elsewhere, where putrid and fermenting substances are neutralized and absorbed without noisomeness and without difficulty; it is astonishing that a similar process should not have been instituted at home. Two things only are necessary, —to have no unnecessary mixture of fluidity, and to supersaturate the exuviæ with ashes, soil, or any carbonaceous matter. The fluid part of exuviæ is known to be invaluable in many manufactures, and cannot be collected in sufficient quantities for their purposes. The sweepings of a house, and the ashes produced in the grate might, without any other assistance, supersaturate the rest. But for the attainment of health and cleanliness, no one surely will grudge (when it is necessary) the trouble of getting sand, or some such substance, to complete this supersaturation. Our artists now bend their genius to every improvement in every object.

object. Can an article of furniture for accomplishing these objects, therefore, be considered as an extraordinary improvement?

To me it appears quite practicable to collect the whole exuviæ of this metropolis, amounting annually to some thousand tons, by such means as I shall suggest. The hand of the magistrate might here, as in most municipal improvements, be useful in the beginning, and in the superintendance of this matter; but individual interest would afterwards, I am persuaded, do the rest very fully.

I would propose to have from twelve to twenty public temples of Cloacina erected in convenient situations, and each under the superintendance of its owner or his lessee. I think these temples ought to be kept clean, by supersaturating and removing every thing of an opposite kind; that they ought to be neat and commodious; of a convenient form, and in such a position, that they should either be on a step, or be a half story up; that the reservoirs should be built round with ashlar, and floored, and have such an inclination of the sides as to make the bottom narrow, which bottom ought to incline towards the back, in which the door or fixture, by which the contents are to be removed, should be placed; and, the bottom being sufficiently raised above the ground below, the cart could be carried under it. A few motions with the shovel would by this means discharge the contents of the reservoir into the cart, which could proceed through lanes and by-paths into the country.

In order to collect the whole exuviæ of a neighbourhood, I would make this distribution a matter of labour and attention. Every morning at an early hour, let the proprietor of the ward reservoir, or his servant, go through and collect the domestic contents. These ought to be collected in each house into a square box, with a lid, in a supersaturated state, which box the lessee would carry with him, leaving another for the use of next day, with a quantity of saturating matter, as ashes, dried soil, &c. He might also collect the fluid exuviæ for the benefit of the manufacturers, in a separate jar; these boxes might be put upon his barrow below, by which he might carry them into the ward deposite, emptying each box therein by a side door, taking care, however, to supersaturate the whole.

As the sweepings of the streets and other rubbish might not be sufficient for all this supersaturation, the carts that carried off the rubbish might, in coming in from the country, bring a quantity of the matter necessary for this purpose, which could be distributed about the ward in the morning by the proprietor or his servant in the returned box. It would be proper to begin with carefully covering the bottom of the box. The top of the contents also, in like manner, should be covered with equal care.

The

The great difficulty to overcome is, to make this a work that persons can go about without difficulty or disgust. Nothing but supersaturation can prevent the last, and a due system of police the first. Penalties for throwing exuviæ out of the windows, and certain immunities secured to the proprietor or lessee of these temples, are necessary. But were the work was once keenly set agoing, a variety of improvements might succeed; and the business, like many others of those that were from the first disagreeable, might be clothed with decency, and even, in course of time, with not unseemly flowers and ornaments.

I beg pardon for being so minute; but it is impossible to expect any advantage without this; for as people recoil from this subject as a thing unfit for notice, they must be convinced, not only of its expediency, but also of its practicability.

I shall conclude with just noticing, that were the system, above recommended, adopted throughout the kingdom, many thousand acres of ground would be made of double their present value. Many thousand invaluable plants, now rare, would be produced in our gardens; the atmosphere of our towns and streets would be purified; and numbers of people not only supplied with labour, but with labour of the most productive kind to the kingdom.

Edinburgh, 19. May, 1809. GLAUCUS.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

Thoughts on Paper Credit.

SIR,

THE old adage of *Ne sutor ultra crepidam* may, with great propriety, be applied to the writer of the 'Essay upon the too great Extent of Paper Circulation in Great Britain, but more particularly in Scotland,' inserted some time since in your excellent Magazine. The gentleman who writes on that subject may, for aught I know, be a *dab* in matters of agriculture, though not versant in the science of political economy. With your leave, I shall make a few remarks on his communication.

He says,—'I shall, therefore, without further preamble, state it, as an axiom universally admitted of, that the paper circulation of this kingdom is vastly too much extended, considering that the public at large have no further security from individuals who choose to pass, or rather *palm*, their bank-notes upon them, than the popular opinion entertained of their respective credits.'

Axioms are not very plenty in the world; and few of them, comparatively speaking, are, as yet, to be found in the science of

political economy. A writer acquainted with his ſubject would pauſe, before he elevated to ſo high a rank what he conſidered to be a truth; but your correſpondent boldly aſſerts as an axiom, what is a matter of conſiderable dubiety among the beſt informed people. It would have been more decent in this gentleman, to have favoured the readers of the eſſay with the arguments which have produced conviction upon his mind of the exceſſive circulation of paper money. To me, at leaſt, it would have been particularly uſeful; for, although I admit moſt readily, that ſome bankers may iſſue too great a quantity of notes, I do not think that the total circulation, upon the whole, is too great for the growing demands of the country. Had he taken the trouble of detailing the reaſons for the opinion he is pleaſed to entertain, I ſhould have conſidered it my duty to have ſtated mine at length; but, as he has kept a guarded ſilence as to his *cauſa ſcientiæ*, or *ratio decidendi*, I ſhall, on the other hand, be equally *mum*.

If paper circulation be too much extended, then your correſpondent ought to have blamed it on account of that over-extenſion merely;—if paper circulation be unworthy of credit, then it merits cenſure, becauſe of its not being good, in mercantile ſlang. When we find fault with the exceſſive tallneſs of a man, we do not do ſo becauſe he happens alſo to be lean. He is too tall, becauſe he is ſo: the property of leanneſs is another fault, purely accidental in the ſame perſon. In like manner, your correſpondent, when he found fault with the over-circulation of paper money, ſhould have expreſſed this unfavourable opinion of it, as founded upon that fact *ſingly*, and not lugged in, neck and ſhoulders, the diſqualification of want of credit. Were all paper as good as that of the Bank of England, ſtill its over-circulation would be an evil; but certainly it is no part of that evil, that it is unworthy of credit. This writer blames a thing, viz. paper money, on account of its poſſeſſing a certain quality, viz. over-circulation, by appealing to its being undeſerving of credit. The truth is, that an over-circulation, and a bad circulation, are two independent and diſtinct qualities; for there may be an over-circulation, yet all the paper be good; and the circulation may be bad, although, in regard to extent, it may be exceedingly limited. It is but fair, to put the ſaddle upon the right horſe.

One would imagine, that all other traders had, before entering into buſineſs, found ſecurity for the amount of their dealings; elſe how comes it that your correſpondent attributes to bankers alone, the fact of producing no other ſecurity but 'the popular opinion entertained of their reſpective credits?' But I would juſt aſk him, does the Eaſt or Weſt India merchant, the great manufacturer, or, in ſhort, the whole mercantile and manufacturing world, find ſecurity to the public for the amount of their engagements? How,

How, then, does he ſingle out a particular profeſſion, that of banking, and hold it up to the public, as depending upon popular opinion ſolely for its exiſtence? If other trading companies found ſecurity, I ſhould certainly, from a ſenſe of equality, be of opinion, that bankers ought to follow their example; but I can ſee no blame imputable to the latter, for not doing what the former never do themſelves.

I am not diſpoſed, at preſent, to admit an over-circulation of paper, nor to deny the fact; but, for the ſake of argument, I ſhall take it for granted; and then conſider the propriety of either of the modes ſuggeſted for remedying the evil.

The firſt mode mentioned by your correſpondent is, for Parliament 'to paſs a bill, obliging every private banker iſſuing ſuch notes, to lodge good ſecurities to the extent of two thirds of his intended circulation, and levying a heavy penalty from any one exceeding ſuch circulation; as alſo, upon being convicted of ſuch delinquency, the party offending to be, *ipſo facto*, deprived of the power of iſſuing bank notes thereafter.'

Your correſpondent ſeems not to know much of the tranſactions of what is called a private banker, or he would know that a perſon of this deſcription does not iſſue notes at all; and, therefore, there can be no reaſon for his finding ſecurity. A public banker iſſues notes of his own; but a private one makes the whole of his payments in paper of other people. What he means by a private banker, I preſume, is in contradiſtinction to a chartered bank; but all are not neceſſarily private, who are not of the latter deſcription.

He talks of the private banker lodging ſecurities to the extent of two thirds of his intended circulation; but he does not ſpecify how that is to be done, or in whoſe hands the truſt is to be repoſed. If the ſecurity is to be in the ſhape of gold and ſilver, locked up in a ſtrong box, then the buſineſs will be conducted neceſſarily at a much greater expenſe than it is done under the preſent circumſtances; and, of courſe, the public, when dealing with a bank, muſt pay that difference. If certain individuals are to become bound to that extent, then, if the banking company fail in buſineſs, the public, to be ſure, will not be the ſufferers; but, what is infinitely worſe, the loſs will fall upon the heads of two or three people, who had come forward out of mere friendſhip. It were much better, in the event of the occurrence of ſuch a misfortune, that the moſt numerous body, the public, and not the friends of the houſe, comparatively ſpeaking very few, ſhould be the ſufferers. If, again, the partners in this banking-houſe muſt give landed ſecurity before they iſſue a note, then many very able people, and men of fortune, from the circumſtance of being poſſeſſed of no

heritable property, are prevented from following the profeſſion, and, of courſe, the public deprived of the manifold advantages attending ſuch an eſtabliſhment. Beſides, we all know very well, that landed gentlemen are the worſt men of buſineſs in the world; and, if no other are to be permitted by law to carry on the occupation of a banker, that ſpecies of trade will ſoon ceaſe to have any exiſtence at all.

But, pray, what does your correſpondent mean by an 'intended circulation?' It may be, that the partners of a banking-houſe find ſecurity to the extent of two thirds of their intended circulation; but what, in the name of common ſenſe, is to hinder them from afterwards increaſing it to ſuch an extent, as that this original proportion will fall to one hundredth part? If this effect cannot be prevented, (and no power upon earth can do it), what the better are the public of the boaſted ſecurity lodged by theſe bankers at commencing buſineſs? Indeed the community will, in all probability, be greater ſufferers than they otherwiſe would have been; for, truſting to the original ſecurity found by the banking-houſe, they have repoſed greater confidence than they would have done in other circumſtances, and, of courſe, become greater loſers. It may be ſaid that, in the puniſhment of the offending party, there is a remedy; but what is it? If the concern be unable to fulfil theſe engagements, how can they pay the fine impoſed upon them by this act of Parliament, without injuring the public? and, if they do pay it, the money eventually comes out of the pockets of the very people whom the ſtatute meant to protect. Moreover, it is ridiculous in the extreme to prevent a banker from iſſuing any more notes, when he is unable to retire thoſe already in the circle. One would imagine, that a ſtatute to prevent the public from truſting a bankrupt, would be a work of ſupererogation. In all theſe matters, individuals are much wiſer than acts of Parliament, and the wiſeacres who framed them.

'The ſecond mode (which indeed I ſhould prefer) would be, for the Legiſlature to allow of no other than the Bank of England notes to be iſſued in circulation in South Britain, with branches thereof to be ſettled in the different large trading cities throughout the kingdom, for the interior circulation and convenience of trade. The ſame plan to be adopted reſpecting Scotland, confining its circulation to the Royal and Old Banks, and Britiſh Linen Company, and branches reſpectively belonging thereto.'

I would take an even bet, that this country gentleman of yours holds ſtock in one or other, or all of the different chartered Companies; elſe why, upon his own principle, need there be any other original or fundamental bank than the Bank of England? This might be the grand trunk bank, and innumerable collateral

ones

ones might branch from this parent ſtem, through the country, in all directions. With theſe acceſſions it would ſupply the demands of the north and ſouth parts of the iſland, as well as with the aſſiſtance of the three Scotiſh banks.

But your correſpondent ſeems aware of the objections that muſt neceſſarily occur to his plan; for he ſays, 'Perhaps this limited reſtriction of the circulation of Great Britain might be deemed a kind of monopoly *legally* veſted in the hands of a few, which, if not conducted upon liberal principles, might be unequal to the full extent of circulation requiſite for the country. Yet I ſhould think, that the managers and directors of ſuch banks, taſting the ſweets of excluſive profit, would not fail to erect branches in proper ſituations adequate to a full circulation.' The limitation here ſuggeſted is, without doubt, a monopoly of the ſtricteſt kind, although your correſpondent wiſhes to draw a veil over it. If a monopoly conſiſts of only one houſe being permitted to carry on a particular trade, certainly the Bank of England would be in full poſſeſſion of the excluſive privilege, if all other banks were imperiouſly baniſhed from the face of the country.

Money is one of the great buſineſſes of a mercantile country; and, like all others, is much better in the hands of many, than of a few. Other trades are carried on by a number of individuals; and this of money, for the ſame reaſons, ought to be conducted by as many as find encouragement to follow it. In the number of individuals carrying on the ſame trade, there is a check upon one another moſt favourable in its reſults to the intereſt of the public. If all the grain in the country were in the hands of one great company, it would be in their power to deal it out either in large or ſmall quantities, as they pleaſed. In like manner, if there be but one bank, it lies in its power to regulate the circulation juſt as it liſteth,—at one time to inundate the country with paper money, and at another to ſtarve it into a ſurrender.

In the caſe of a country like this, where the whole circulating medium is nearly in paper, any oſcillation in the quantity of money is attended with the moſt injurious effects to the holders of goods of every deſcription. A merchant furniſhes a large quantity of commodities, at a time when the circulation chances to be great, and, of courſe, pays a high price. The bankers, in the meanwhile, draw in the greater part of their exceſſive circulation; and the merchant is under the neceſſity of ſelling at a moment when the circulating medium is at a low ebb, and, of courſe, is a very conſiderable loſer. A number of banks, however, who cannot poſſibly be actuated by an uniform ſpirit at all times, will prevent this riſe and fall in a great meaſure taking place, and produce as regular a ſtate of money circulation as the nature of the thing

will admit of. As it is, this flux and reflux of the quantity of money in the market, is felt occaſionally, in a great degree, y mercantile people, and, in critical times, is the ruin of thouands.

Your correſpondent muſt have ſtrange notions of buſineſs; otherwiſe he never would have ſaid that a bank, having a monopoly, would conduct themſelves in a manner moſt advantageous both to themſelves and to the intereſt of the public. If he will take the trouble of looking about him, he will find that the fact is directly the reverſe. It is paſſing ſtrange in him indeed, to ſay, that a banking company, in the poſſeſſion of a monopoly, would give themſelves the trouble of 'erecting branches in proper ſituations adequate to a full circulation.'

It is not in the nature of things, that one great company ſhould be as active and vigorous in the proſecution of a particular branch of business, as a great number of ſmaller ones. A bank may, like the human body, become unwieldy and indolent from its extreme bulk. In the inſtance of one large bank, the individuals who divide the profits, or, in other words, the maſters, are incomparably far leſs numerous than the ſervants, or thoſe who work for wages. All activity in buſineſs reſides wholly in the former, becauſe of their profits being in proportion to their induſtry; while, on the other hand, the latter are indolent and lazy, becauſe of their reward being fixed and determinate. This ſmall number of induſtrious individuals, acting upon ſo large a maſs of *vis inertiæ*, muſt neceſſarily ſpend a greater part of that induſtry, which, in other circumſtances, would be moſt productive to them, but, in this particular inſtance, totally unprofitable. In the caſe of a variety of banking eſtabliſhments, matters are upon quite a different footing; becauſe the number of perſons concerned in the profits are infinitely more numerous than the labourers for hire. In theſe, accordingly, there is an activity and an induſtry not diſcernible in a large eſtabliſhment; and the only danger is, that from this very induſtry, buſineſs may ſometimes be puſhed to a dangerous extreme.

A great banking-houſe eſtabliſhed in the metropolis, can have no feelings congenial to thoſe of a public living at a diſtance. From being only one, they are naturally egotiſtical and ſelfiſh; and, from their unacquaintance with what is going on in the provincial world, they cannot enter at all into the wants or wiſhes of the community of which they are members. A number of private bankers, on the other hand, from the circumſtance of being ſcattered over the face of the country, and being, in regard to rank in ſociety, more upon a footing with people in their neighbourhood,

neighbourhood, know more of the wants, and are better inclined to enter into the feelings of those who are more nearly their equals. For these reasons, private bankers must be more capable of judging of the amount of a full circulation, and more disposed to augment it in case of its being below the necessities of the country.

Competition is the life and soul of business; and, without it, all trades, however well disposed the partners may be, will degenerate and fall into decay. The improvements that have taken place in the different manufactures within these late years, and the wonderful accommodation enjoyed by the public in every department of business, and, among others, in that of banking, is much owing to this cause. Your correspondent may be perfectly assured, that if all competition were done away, by the establishment of a monopoly bank, he and the rest of the public may bid an eternal adieu to the present agreeable mode of business to be met with in almost all the banking-houses in the country.

Having, with so very little ceremony, censured both of the plans suggested by your correspondent, it may be imagined incumbent upon me to submit to your readers my own cure of an evil, which I do not altogether deny.

I am, Sir, one of those people, who think that the manufacture of statutes and acts of Parliament should be upon as small a scale as possible. It by no means follows, that, because the Legislature pass a law, it must be innocuous in its effects, and beneficial to the public. Many an act, which was supposed by its wise framers calculated to remedy an evil, has either failed in the accomplishment of its object, or, with the removal of an abuse, has planted another of an infinitely worse tendency in its place. Were all statutes, like milk and honey, innocent, I would not hesitate knocking them off by thousands; but when, on the contrary, they may prove injurious, I would be exceedingly cautious in the promulgation of them.

Were it incumbent upon all other merchants and traders to find security to the public for two thirds of their intended business, I should certainly give my vote for banks doing the same thing. But what man ever started the propriety of an East or West India merchant finding this requisite security. If, therefore, other traders, in whose well-doing the public are as much interested as bankers, are not called upon to find security, why should bankers be whipped into an obligation of this kind? In a mercantile sense, it is credit alone which connects a merchant or banker with the public; and, if nothing more is required of the former,

than the popular opinion of his soundness, why should more be demanded from the other?

In physics, if land and water be in a state of freedom, they will most assuredly find their level; and, in the economical world, I believe that, if matters be just let alone, they will be corrective of each other. We do not meddle with merchants and manufacturers; and, except in a few instances, we find that the credit they receive from the public is nearly commensurate with their merits. Precisely does the same thing take place in the case of bankers also.

My simple remedy, therefore, of the evil, when it does occur, is just to let things take their course; and the result will be infinitely more beneficial to the public, than all the acts of Parliament which it is possible to make.

I agree with your correspondent, that the subject of his essay, and of these animadversions, is not, in appearance, ultimately connected with agriculture, which it is the professed object of your Magazine to discuss. But, though political economy will not make a farmer, yet I am of opinion that the two sciences mutually assist each other, and that a man cannot be an enlightened husbandman, without knowing something of the principles of this modern study. If no other good were to result from the union of the two, than a conviction of the transcendant superiority, both in an individual and in a national point of view, of agriculture over commerce and manufactures, enough would be gained to the country. Perhaps, at some future period, I may consider this interesting subject in this twofold light, and take the liberty of transmitting the fruit of my meditations to you.

I am, &c. A Private Banker.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

Reply to the Strictures on the Description of Perthshire Husbandry.

Sermo datur cunctis, animi sapientia paucis.

Sir,

Among the numerous, able, and respectable correspondents whose exertions have contributed to raise your publication to its present pitch, one has lately appeared, of a very singular cast, the drift of whose communications is not easily comprehended, whilst the language, in which they appear, is of a kind not generally used in decent company. I need hardly say, that the gentleman who signs *A Constant Reader*, is the correspondent here alluded to. In one respect, that gentleman bears some resemblance to Erostratus, who resolved to render himself conspicuous by some great action; but,

but, being unable to achieve any thing remarkably meritorious, he burnt the temple of Diana, that ſo, rather than his name ſhould ſink into oblivion, it might be handed down to poſterity, even on account of his committing a crime of enormous atrocity. In like manner, *A Conſtant Reader* being evidently and confeſſedly incapable of furniſhing any thing for your Work of a practical or uſeful nature, in agreſtical matters, aſſumes the office of cenſor, and criticizes ſeveral performances on ſubjects of a ſpeculative caſt, by ſome of your firſt-rate correſpondents. Such conduct, in no caſe very laudable, is rendered quite inſufferable by the falſe quotations, unfair inferences, dogmatical opinions, and offenſive language which he uſes. He ſeems urged on by a ſpirit of contradiction; keen, beyond any thing hitherto ſeen in the Farmer's Magazine. In the *firſt* place, he attacked the productions alluded to; but, as he did not chooſe to do this in ſuch terms as one gentleman will always uſe when addreſſing another, the authors have hitherto forborne to take any notice of him; being diſguſted, I preſume, by his uncourtly addreſs. Finding himſelf diſappointed in raiſing a ſquabble with theſe gentlemen, he, in your thirty-ſixth Number, falls foul of the 'Comparative View of the Paſt and Preſent Huſbandry of Perthſhire,' Vol. VIII. p. 425, which I ſent you. I had no right to expect better uſage at his hands, than a Judge of one of the ſupreme courts of the kingdom had previouſly met with. Accordingly, to uſe his own words, he 'expreſſes himſelf with freedom' when reviewing that production; a freedom, in truth, unſhackled by either candour or decency. But my ideas of honour not being quite ſo refined as thoſe of the gentleman whom he formerly attacked, I will no more ſuffer my well founded ſtatements to be miſrepreſented, even when that is attempted in ſcurrilous language, than I would endure an inſult from a fool or a fiſhwife, without reſenting it.

At the outſet, *A Conſtant Reader* ſays,—'when I venture beyond my profeſſion, I certainly lay myſelf open to criticiſm. *Ne ſutor ultra crepidam* has been in uſe as an aphoriſm for eighteen hundred years; and I have not ſeen a ſtronger inſtance of its juſtneſs, than this gentleman's conduct furniſhes. Though neither a landed gentleman nor farmer, * he controverts the opinions of ſome of the firſt agriculturiſts in the country, in as dogmatical a manner as if he had ſat in the profeſſor of agriculture's chair for half a century. He does not, however, inform your readers what my profeſſion is; only, they may readily learn from him, that I am not a farmer; as every one of the topics which he is ſo diſſatisfied with my manner of treating, is cloſely connected with agriculture.

He

* See vol. IX. p. 163.

He then deſcends to particulars; and, in the *firſt* place, finds much fault with me for being of opinion, that the climate of Scotland had, of late years, become colder than formerly, and the morals of its inhabitants more 'decayed.'

The paſſage which relates to the growing depravity of morals, he does not quote: for what reaſon I pretend not to know. Every one, indeed, who takes the trouble to peruſe the View of Perthſhire Huſbandry, will ſee, that it contains no ſuch aſſertion: but then, your Conſtant Reader could have done here, what he does in other caſes, he could have perverted ſome paragraph to ſerve his purpoſe. He, however, makes up for this deficiency, by a lengthened declamation againſt the opinion quoted relative to the growing deterioration of climate; and ſcruples not to occupy three full pages of your Magazine, in attempting to expoſe me to ridicule, for entertaining any ſuch notion. And this he does, without any better foundation, than my ſaying, that 'it ſeems to be the opinion of ſome people, that the climate of Scotland had become much leſs genial than formerly.' Though I added, 'it is very queſtionable, whether the alteration has taken place in the weather, or the conſtitution of their bodies,' he very ingeniouſly quotes the whole paragraph, except this laſt ſentence; and fathers the firſt theory on me; at ſame time, imperiouſly calling on me to adduce my proof. But not holding myſelf reſponſible for every opinion which I may talk of, I certainly conſidered myſelf under no obligation to bring forward evidence in ſupport of either of the opinions mentioned. The only point, the *onus probandi* of which here falls on me, is, that there are people of both theſe opinions; and, luckily, your correſpondent ſuperſedes the neceſſity of my doing this, as he avows himſelf to be of the one, and ſtates that the other is 'a cant very common among people now-a-days.' Indeed, he appears to be better acquainted with the cooling hypotheſis than I am; for he tells us, that 'the only legitimate method of aſcertaining the fact of the increaſe of rigour in the climate of this country, is, a ſeries of meteorological obſervations for the ſpace of a century back.' Hence we ſee, that, according to this theory, ſo very ſlow has the deterioration of climate been for the bygone century, that it was perceptible to the ſenſes of a few old people only; yet he tells us, that, in leſs than a century to come, 'this iſland' will, agreeably to the ſame theory, be 'wrapt up in the ſnows of eternal winter.' Now, this information was new to me. The way in which I underſtood my fellow 'croakers' was,-that, ever ſince they remembered, the weather has been ſlowly, though certainly, turning leſs genial; but I do not recollect their ever having ſaid, that the ratio of increaſe was to be higher during the enſuing, than it has been during the bygone century.

He

He ſays, ‘ it is really wonderful, that a perſon, with the ſmalleſt pretenſions to common ſenſe, would appeal to the feelings of old people, in ſupport of a particular fact.’ And, a little afterwards, he adds, ‘ the views of both ’ old and young ‘ are regulated, not by any deliberate conſideration of the thing itſelf, but preciſely as they happen to feel at the moment.’ Here we have a ſyſtem of ethics broached, quite diſtinct from any that occurs to my memory: and from what we hear of it, it ſeems not very gratifying to human pride. It deprives man of the uſe of his reaſon, whether founded on his own, or other people's experience; and makes him form his opinion from the impulſe of the moment. In cold weather, he is of the ſame opinion with thoſe who aſſert, that cold is ſtill on the increaſe in our atmoſphere; and that, ſooner or later, our planet will be equally unfit for the habitation of mortals ſuch as we are, as is the planet Saturn. During heat, again, he joins in opinion with thoſe who tell us, that the orbit of our earth is gradually contracting, and, of courſe, is approaching the ſun, into whoſe body it is ultimately deſtined to fall, for the purpoſe of replacing the waſte occaſioned by the conſtant emiſſion of light.

Though I certainly view the opinion of those people who ſuppoſe a continual increaſe of cold in the ſame light with that of the old man, who blamed book-printers for uſing a much ſmaller type than they did when he was young; I cannot help obſerving, that the only argument A Conſtant Reader adduces in oppoſition to this cooling theory, is very unhappily choſen. He ſays, ‘ Surely, in proportion as the woods ’ in America ‘ came to be cut down, and the ground brought under a refined cultivation, the climate will be in a progreſſive ſtate of melioration.’ Yet he had juſt before told us, that ‘ when a country is wholly covered with wood, trees will, by reaſon of the ſuperior ſhelter, grow every where;’ and in this way accounts for vegetables formerly growing, where they will not now thrive. He ſays, further, ‘ The fact of the matter is, that the moſſes are the reſult of the fall of theſe woods.’ And in another place he ſays, ‘ The very circumſtance of an accumulation of moſs in the neighbourhood of the ſite of an antient foreſt, is, of itſelf, a ſufficient reaſon why trees will not now thrive in that quarter.’ Thus the fall of the woods produces moſſes; and moſſes, *i. e.* peat, occaſion woods to fall, and prevent them from riſing again. This is ſtout argumentation. But ſtill this impertinent queſtion obtrudes itſelf upon our imagination,—As decayed vegetable matter is, in every other caſe, of great utility to growing vegetables, when mixed with the ſoil in which they ſtand, why is peat or moſs an exception in cold climates?

He next ſays, ‘ Your correſpondent details a variety of cauſes for

for the late rise in the rent of land; but, after all, he does not think they are sufficient to account wholly for the effect.' Here we have another of his misrepresentations; for, after stating, that the depression in the value of the precious metals, the effects of the late corn law, and the recent improvements in agriculture, had all contributed to enable the tenant to pay a higher rent; instead of imposing my own opinion on the public, I added, 'Still, however, it is a very general opinion, that all those causes, combined, are inadequate to effect such a rise as has of late taken place. It can only be accounted for, by the high price which grain has maintained for several years in the north of Europe.' On this he remarks, 'It does not seem to be attended to by people who pretend to talk on the subject, that the price of grain in England must in some measure be influenced by that of Poland, or any other country in Europe.' Either this observation is pointed at me, or it is not. If it is not, what has it to do here? If it is, I cannot comprehend its drift. I said, that the high price of grain in the north of Europe, which certainly includes Poland, as its produce is shipped from ports in that quarter, was one of the principal causes of the high rent of land in Scotland. So that this observation by your Constant Reader is, in the one case, very improperly introduced; or, in the other, I am blamed for not saying what, in very explicit terms, I had just said. He adds, 'We all know, that the grain market of London, Liverpool and Glasgow, reciprocally act upon each other; and that there exists, at all times, a relative cheapness or dearness among these different markets. The same thing takes place, more or less, over all the different markets of Europe, and of the world. The law of gravitation, in the physical world, is not more true than that of a level in the price of grain.' On this I beg leave to observe, that there is no doubt of the several grain markets in Britain reciprocally acting upon each other under the present corn law, because no prohibitory statute interposes. But betwixt them and the other grain markets of the world, the case is very different. The laws prevent this country from being, as it were, inundated by continental grain, however cheap and plentiful it may be there. And A Constant Reader must know, that however true the law of gravity, or attraction, in the physical world, may be, it is, in certain circumstances, partially diverted from its general tendency. Dr Maskelyne found, that a lump of limestone, in Perthshire, had the effect, in some degree, of counteracting all the rest of the terraqueous globe. In like manner, a dearth in France or Spain would prevent a plentiful crop in the North from having the common effect on the British market; and a plentiful crop in Ameri-

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ca, would prevent a famine in Poland from causing a scarcity in Britain; providing always, that no statutory regulation is brought into play.

Still further, in support of this doctrine, he says, 'If the price of grain be in England as 3 to 1 in Poland, at any particular period, it will be as 9, if the grain in Poland rises to 3.' Again, 'the price of grain is always in proportion to the wealth of the particular country of which we may be talking at the time. By the wealth of a country, I mean its industry: for example,' &c. After insisting on this for some time, he says, 'Your correspondent seems to have a confused idea of what I have just been saying.' But, Sir, I must acknowledge, that I have not got the length of even a confused idea of what he here says. I had entertained very different ideas. I supposed, that a boll of wheat could be carried across the German Ocean, when it cost three pounds, for the same freight as when it costs only one; and the same may be said with relation to many of the other items of expense, as carterage, porterage, custom-house fees, warehouse rent, &c.; the only articles on which a proportionate rise takes place being commission, insurance, and profit.

With respect to his assertion, that corn is always dearer in an industrious country, than in 'a poor one,' I deny it flatly. Grain in Spain was lately four or five times the price it brought in Britain; and wheat is always cheaper in America than with us, though the Americans are much more industrious than we are, as they almost all work with their own hands.

We next have a lecture on my redundant composition. I have given as one cause of the late rise in the rent of land, 'a greater number of people possessing capital sufficient for stocking a farm than formerly, who can turn to no other employment;' whereas your correspondent maintains, that I should have 'accounted for it by the existence of capital simply. An augmentation of capital (he says) supposes an increase in the number of persons possessing it; and when an idea can be expressed by one sentence, it is more philosophical than to do it by means of a greater number.' It is at least more *philological*; but it is rather surprising that one, who could write such sentences as these, should blame me for tautology in the present instance—'It is really wonderful, that a person with the smallest pretensions to common sense, would appeal to the feelings of old people, men or women, no matter which,' &c. p. 434. 'The same thing takes place, more or less, over all the different markets of Europe, and of the world.' p. 435. But the whole proceeds upon a gross perversion of what I wrote. I neither said, nor meant to say, that the capital in the hands of farmers was larger now than formerly (though that is an unquestionable fact);

I merely stated, and I did it in concise and explicit terms, that there were a greater number of people who had capitals adequate to the stocking and improving of farms than formerly, who could turn to no other way of gaining a livelihood;—an allegation very different from the one which he makes. It would have been little to my purpose, to have said that the body of farmers were in possession of a larger capital than formerly, if the most of that capital was in the hands of a comparatively small number; because, then, the effect of competition would have been but trivial.

The assertion, that these competitors can turn to no other employment, he declares to be another error. 'Were this the fact,' says he, 'it would prove, that the late rise of rents has been unnatural, and therefore will not last.' Whence he gathers this deducement, I know not; this I know, that no such inference can be drawn from what I have said. Indeed, I do not see why the same causes which have raised the rent of land, may not keep it up, without ruining the farmer. 'I never heard,' adds he, 'till this moment, that all the employments in Scotland were full of hands, and that capital can find no room for its activity but in agriculture.' This is a distant insinuation that I had made these assertions, and that farmers, rather than take land on the terms commonly insisted for at present, will turn tradesmen, manufacturers, or merchants; a transition which he considers as quite easy. He calls loudly for me to prove the contrary of this, hinting, that, if I do not, he will 'make an assertion directly in the teeth' of mine. I frankly submit to this mode of deciding the point at issue;—so the public will judge for themselves.

A Constant Reader proposes another method by which the farmer may find a livelihood, without renting land. If he has 10,000*l.*, he informs us, that he may lend it to some person in trade, and live on the interest. This, I grant, he may do; and, in a short time, perhaps, accept of 2500*l.* in full of all demands. But the far greater part of those who contribute to raise the rent of land, have capitals nearer 500*l.* than 10,000*l.*; and the generality of these, by their skill and industry, in a farm suited to their abilities, are enabled to live much more comfortably than they can do on 25*l.* a year.

But all this altercation must go for nothing; because, whether it would be advantageous for them to do so or not, it is sufficient for my purpose, that the increased number of farmer capitalists do not desert the profession in which they have been bred.

Again, he urges—'It is ridiculous for' me 'to say, that an industrious tenant *could* not make money upon a farm which, upon his leaving it, was let at five times the rent.' I did not say, the

tenant

tenant 'could' not make money upon this farm. That is another misrepresentation. I only said, he did not make it. So that it is impossible to infer from my words, which of the two tenants is the 'born idiot.' Most people, who are acquainted with the circumstances, divide the folly betwixt them.

He likewise finds fault with me for stigmatizing kain and bonnage as disgraceful. 'There does not appear to me,' says he, 'any disgrace in a tenant either paying kain, or driving fuel.' That an affront is not worse than it is taken, is a saying which has acquired the currency of a proverb; the meaning of which, if I understand it, is, that where the feelings are not excited, no ignominy attaches;—so that what is considered as disgraceful in one quarter of the kingdom, may be viewed as indifferent, or even honourable, in another. I have heard of a tenant in Scotland, who, when he found the laird in bed with his (the tenant's) wife, took off his bonnet, and thanked the great man for the honour which he thus condescended to bestow on him and his family. Now, in some places of Scotland, a tenant, if he had not considered this attention as an insult, would, at least, have been less grateful for the favour. Again, in some districts, it is a common practice for the farmers' wives and daughters to carry out the laird's dunghill, on their backs, to his bear-seed, as part of their rents; and this prestation is submitted to as a matter of course. But, Mr Conductor, were your East-Lothian belles annually called out in the months of June and July, each accoutred with a creel on her back, to carry out the manure on the landlord's home farm, to his turnip or wheat fallow, I shrewdly suspect, that, at first, they would view it as rather a degradation. For my own part, I never was concerned in paying rent in any other shape than in money: I have, however, heard of farmers, or their wives, submitting to what I thought a degree of meanness, in courting the housekeeper or henwife, for the purpose of having the kind or condition, or time of delivery, of kain fowls changed, so as to be more convenient for them.

But it is evident, that the degree, in the scale of society, where this gentleman places the farmer's character, is calculated for the latitude of some other district than that of which I was then treating; for he himself, when contradicting another of my observations, says expressly, that 'all services, of whatever kind, depress the moral character of the cultivator of the land;' so that, in his opinion, turpitude of character is no disgrace to a farmer.

I had said, that 'the great number of candidates which appear at every opening, enables the landlords to propose very unreasonable conditions of lease, without deterring offerers,' &c. This,

your

your correspondent alleges, cannot happen; because 'the interest of the landlord and tenant are identically the same.' And after occupying a page and nearly a half, sometimes with truisms, and oftener with argument quite foreign to the point in hand, he owns, that 'these absurd stipulations will not deter offerers altogether, but merely keep good tenants aloof.' Now, Sir, this is exactly my meaning, and in fact coincides with what I said.

In criticising what I urged relative to one of those unreasonable conditions, which I specified, he gives us a specimen of his knowledge as a farmer. 'One farm,' says he, 'may be better adapted for pasture, another for turnips and barley, and a third for wheat and potatoes.' See what book learning does! Few mere farmers were capable of making this discrimination.

He next shines as a lawyer, by declaring it to be his opinion, that the law would not sanction the clause of irritancy inserted in leases, in case of the tenant becoming bankrupt; principally because it affected the interest of third parties, who are presumed to know nothing of the matter. But do law courts hesitate to enforce deeds of entail, by which the interests of third parties are as much affected as by the clause in question? It is to no purpose to tell, that these deeds are always registered. A dealer or tradesman cannot send perhaps fifty miles, and pay fees to inform himself, whether or not every landed customer holds his land in property, or only under entail. And do not law courts rigidly enforce the clause secluding assignees and subtenants? Nay, have they not gone much further, by supplying such a clause where it is omitted? Yet, by this, the interest of third parties is more frequently affected than by the other.

A Constant Reader says, it is 'a matter of mere moonshine' whether the landlord or tenant insures the steading. 'If a landlord,' adds he, 'asks 100*l.* a year for a particular farm, and pays 5*l.* *per annum* as the insurance of the steading on the premises, his rent is in that case 95*l.*; and if the nominal rent be 95*l.*, and the tenant pays the premium besides, the case is exactly the same. It is a matter of total indifference, therefore, whether the landlord or tenant pays the insurance.' To this I reply, that if the landlord receives 100*l.*, his rent is 100*l.*,—whether he pays an insurance premium on the onstead, or risks accidents himself; but if the tenant pays an additional 5*l.* as insurance premium, the rent is 105*l.* As the proprietor is in law bound to rebuild the houses, in case of destruction by fire, he has no better reasons for deducting the amount of the premium for insurance from his gross income, than rogue-money, cess or property-tax. Was the tenant on this farm to insure his stocking at 5*l.* annual premium, and the landlord to allow

allow him the amount in his rent, what would the real rent be in that case? The cases are exactly parellel.

I am aware that I shall be told, this is arguing wide of the point; because it is evidently the same to the farmer, whether he pays 100*l.* in name of rent or tack-duty, or 95*l.* under that designation, and, in addition, 5*l.* as a premium for insuring the steading. Such reasoning is extremely plausible, and every way consonant to counting-room ideas; but to persons acquainted with the general conduct of farmers in treating for a lease, the difference is very great. On these occasions, such prestations as insurance premium, the moiety of the school-master's salary, kain, cess, the horse-tax, and even (with people who have never paid it) the property-tax, are often overlooked, or, at best, little attended to, under the impression, that if the farm is worth so much rent, it will certainly be possible to bring this or that trifling item out of it too. Such conduct is no doubt preposterous in the highest degree. It is nevertheless true, that many, who, in other respects, by no means deserve the epithet of 'born idiots,' act in this manner; and proprietors or their agents must have this in their eye, or why do they insist on such stipulations?

It is added, that I 'seem enraged at landlords making part of the rent payable in grain, convertible at the county fiars.' In what this rage of mine appears, I know not. I have already said, that I am not personally interested. I make use of no improper epithet, such as 'idiot,' or 'pericranium—a little confused.' In short, I appeal, Sir, to you and your readers, if it is possible to conceive more temperate language, than is used in the paragraph in question. As what is there stated is sufficiently plain to every unbiassed person, and as I have already taken up so much of your Magazine, I decline enlarging on this point, further than merely observing, that he seems to know very little about the subject under discussion. This appears from his saying—'It is not against a grain rent that' I 'should express my disapprobation, but against the kind or species of grain that is made payable out of the particular farm.' Now, the exact converse of this is the case. It is not against paying rent in this or that particular species of grain, that my objection rests; it is against payment in any species whatever: for as the price of any one species is found to affect that of every other, more especially in times of scarcity, the ascertaining, by the fiar price of wheat, for instance, the rent of a farm where none is grown, is, at the worst, but an inconsiderable hardship, as it may happen that the price of oats, of which we shall suppose that the crop chiefly consists, is higher in proportion above

the medium price than that of wheat, in which case the tenant is a gainer by the exchange. 'The land does not produce gold or silver, but grain of some particular kind or other; and therefore,' says he, 'the natural and legitimate return for the use of it, for nineteen years, is a certain part of its produce.'—'If the land be too light to carry a weighty crop, it is silly in him,' the tenant, 'to come under an obligation to deliver a commodity which forms no part of the produce of the land.' From these quotations, it is evident that this gentleman has only 'a confused idea' of the matter; for, though the *ipsa corpora* are not taken, it is still gold or silver, or, what is supposed equivalent, bank notes, that are received.

With respect to what I stated relative to the mode of letting land, sometimes by private, sometimes by public offers, and, in one case, by both methods; he tells us, that 'the right of the landlord to expose his land in any way he pleases, seems to me undoubted.' Had your correspondent thought of this argument sooner, it might have saved a great deal of altercation; and being at least as much to the purpose as the greater part of his remarks, it might have been substituted for them. He may however observe, if he chooses, that it is not the proprietor's right to do this or that with his land, that is questioned. I only glanced at the *inexpediency* of such management; and shall now conclude with observing, that were your '*Constant Reader*' to read with more attention, he would either write less, or, what he did write, would be more to the purpose.

January 20th, 1809. P——N.

FOR THE FARMER'S MAGAZINE.

Dr Franklin's Idea of the Corn Laws; taken from his Thoughts on Commercial Subjects, *Vol. II. of his Works, published in London*, 1799.

'WHEN an exportation of corn takes place, occasioned by a higher price in some foreign countries, it is common to raise a clamour, on the supposition, that we shall thereby produce a domestic famine. Then follows a prohibition, founded on the imaginary distress of the poor. The poor, to be sure, if in distress, should be relieved: but, if the farmer could have a high price for his corn, from the foreign demand, must he, by a prohibition of exportation, be compelled to take a low price, not of the poor only, but of every one that eats bread, even the richest? The duty of relieving the poor is incumbent on the rich: but, by this operation, the whole burden of it is laid on the farmer, who is to relieve the rich at the same time. Of the poor, too, those who are maintained

tained by the parishes, have no right to claim this sacrifice of the farmer; as, while they have their allowance, it makes no difference to them, whether bread be cheap or dear. Those working poor, who now mind business only *five* or *four* days in the week, if bread should be so dear, as to oblige them to work the whole *six* required by the commandment, do not seem to be aggrieved, so as to have a right to public redress. There will then remain, comparatively, only a few families in every district, who, from sickness, old age, or a great number of children, will be so distressed by a high price of corn, as to need relief: and these should be taken care of by particular benefactions, without restraining the farmer's profit.

'Those who fear that exportation may so far drain the country of corn as to starve ourselves, fear what never did, nor never can happen. They may as well, when they view the tide ebbing towards the sea, fear that all the water will leave the river. The price of corn, like water, will find its level. The more we export, the dearer it becomes at home: the more that is received abroad, the cheaper it becomes there; and as soon as these prices are equal, the exportation stops of course. As the seasons vary in different countries, the calamity of a bad harvest is never universal. If then, all ports were always open, and all commerce free; every maritime country would generally eat bread at the medium price, or average, of all the harvests: which would probably be more equal than we can make it by our artificial regulations, and therefore a more steady encouragement to agriculture. The nation would all have bread at this middle price; and that nation which at any time inhumanly refuses to relieve the distresses of another nation, deserves no compassion when in distress itself.——

'Perhaps, in general, it would be better if government meddled no more with trade, than to protect it, and let it take its course. Most of the statutes or acts, edicts, arrets, and placarts of parliament, princes and states, for regulating, directing, or restraining of trade, have, we think, been either political blunders, or jobs obtained by artful men, for private advantage, under pretence of public good. When Colbert assembled some wise old merchants of France, and desired their advice and opinion, how he could best serve and promote commerce? their answer, after consultation, was in three words only, *laissez nous faire*, "let us alone." It is said by a very solid writer of the same nation, that he is well advanced in the science of politics, who knows the full force of that maxim, *pas trop gouverner*, "not to govern too much;" which, perhaps, would be of more use when applied to trade, than any other public concern. It were therefore to be wished, that

commerce were as free between all the nations of the world, as it is between the several counties of England: so would all, by mutual communication, obtain more enjoyments. Those counties do not ruin each other by trade, neither would the nations; for no nation was ever ruined by trade, even seemingly the most disadvantageous. Wherever desirable superfluities are imported, industry is excited, and thereby plenty is produced. Were only necessaries permitted to be purchased, men would work no more than was necessary for that purpose.'

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

Recent Plan for improving and beautifying the hitherto unimproved Parts of the Duke of Buccleugh's Estates in the South of Scotland.

SIR,

IN two former papers which you had the goodneſs to inſert in your 34th and 36th Numbers, I endeavoured to deſcribe the improvements of ſurface draining, &c. on ſheep farms, mole-catching, the conſequences reſulting from theſe, and the newly introduced mode of watering land, as practiſed on the Duke of Buccleugh's eſtates in the ſouth of Scotland. I ſhall, therefore, in this letter, proceed in the plan which I have preſcribed to myſelf.

Ever ſince the Duke came to the eſtate, he has continued to give an unremitting attention to its improvement, by employing men as factors who had the ſagacity to diſcern, and the ſteadineſs to execute plans calculated to promote the common intereſt of himſelf and his tenantry. But it is not my intention (though I could) to run over thoſe of earlier date. I rather wiſh to arreſt your attention, on the meaſures which he has lately taken, to aſcertain, and carry into effect, what may not improperly be called the *maximum* of improvement in thoſe farms, where the tenants, contenting themſelves with ſheep, had little attended to agriculture, or had not carried it to the length they might. Know then, Sir, that, in the ſouth of Scotland, he has two perſons who hold the higheſt official ſituations under himſelf, viz. his chamberlain, or collector of rents, and the maſter of all his works and improvements. It is to the duties impoſed upon the laſt of theſe, that I am naturally led by my ſubject. Yet, as death has lately removed him who held the firſt of theſe offices for many years, (I mean, the late Adam Ogilvie, Eſq. of Hartwoodmyres), permit me to offer, in paſſing, my tribute of reſpect to his memory. It is certainly difficult for a factor to conduct himſelf ſo, as to acquire the eſteem of thoſe who are connected with him; but I can ſafely ſay, that his punctuality in buſineſs, and his ſteady regard for the comfort of the tenantry, and the

the lower orders, have ſeldom been ſurpaſſed. Indeed, the poor about Hawick mourn him as a friend; and the farmers in Tiviotdale teſtified their reſpect in the handſomeſt manner, when, at the Farmer Club ſubſequent to his death, above 50 of them appeared in deep mourning. How different is this from the death of thoſe who grind the faces of the tenantry; whoſe death is deemed a deliverance, and whoſe memories are curſed! But it becomes me to return to my ſubject.

In 1792, a conſiderable alteration having taken place among the farms, in order to come at an equalization of rent, and, in ſome meaſure, of profit, among the tenantry, certain rules were delivered for the general management, both of ſtock and crop. But theſe rules, from various cauſes, had not been generally obſerved. A little imp, called Avarice, had taken poſſeſſion of the purſe-ſtrings of ſome, and was willing to receive every profit from the ſoil, but averſe to return any thing for its improvement. Indolence prevented others; an averſion to leave what were thought to be the good old practices of their fathers, influenced a third; and ignorance, by its willing, but ill-directed efforts, not unfrequently threw away money, both to the injury of the perſon himſelf, and the diſcouragement of his neighbours. It was in this ſituation of things that the Duke interfered; and, with a wiſdom and benevolence conſpicuous in his character, condeſcended to direct the operations of his tenantry,—in thoſe diſtricts eſpecially where his influence was moſt wanted. Accordingly, about ſeven years ago, he gave inſtructions to Mr Keir, his maſter of works, to ſurvey all his eſtates in Eſkdale, Liddiſdale, Tiviotdale, and Selkirkſhire, with the view of aſcertaining the extent of ground that ſhould be marked out for improvement by the plough, or by planting. Aſſiſted by Mr William Crawford, author of the map of Dumfries-ſhire, he began his taſk; and, with that impartiality that marks his character, was neither biaſſed by friends nor enemies. Indeed, he conſidered it beſt to conſult with neither, but faithfully to ſurvey, and honeſtly to report the reſult of his obſervations. This general ſilence which prudence dictated, gave no ſmall occaſion for reflection at the firſt; for ſome thought, that they ought to have been conſulted, and others predicted the ruin of their ſheep, from their being excluded from the lower grounds. But theſe prejudices have now, in a great meaſure, died away: moſt of the farmers have acknowledged his ſuperior diſcernment; and all feel themſelves ready to own, that his aim was to benefit his maſter, by benefiting them. On ſo extenſive an eſtate as that of the Duke's, it is natural to think, that the ſurvey I am ſpeaking of, would form the work of ſeveral years; eſpecially as it was conducted amidſt much other buſineſs. But it was at length com-

pleted. Accurate and beautiful plans of the different rivers, where the farms are ſituated, with the projected improvements on each farm, were made out, and tranſmitted to his Grace; and what muſt be peculiarly gratifying to him, is the knowledge he poſſeſſes, that they are everywhere either carried, or rapidly carrying, into execution. But, leaving the outline, let us deſcend to particulars.

The *firſt* thing, then, in this plan of improvement, is *a ring-fence*, which ſeparates the ſheep paſture from the ground deſtined for cultivation. This, according to the Duke's deſire, is always to be of ſtone, in order the more effectually to exclude the ſheep; and is either cloſe built to the full height, and coped with earth or ſtone, or cloſe built for two or three feet, and an open dyke above it, of rough ſtones, piled upon, and locked into each other. This laſt, which is commonly called the Galloway Dyke, is conſidered as the preferable fence.

After the ring-fence has been completed, the different *ſubdiviſions* within it, as marked upon the plan, are meaſured off, and pitted out upon the ground; forming, thereby, the *ſecond* branch of improvement. Theſe are intended to combine utility with beauty; and may either be of ſtone or thorn, as the farmer pleaſes. If thorn be preferred, the thorns are given *gratis* by the Duke, at the rate of 50 to the rood, on their diligently obſerving the following conditions. Five feet, on either ſide of the line of encloſure, muſt be ſtrewed either with dung, or lime, or both, at the rate of a cart load of good rotten dung, or a Carliſle buſhel (half a Linlithgow boll, or three Wincheſter buſhels) of lime at the leaſt, to the chain length of 74 feet. A ſod muſt be raiſed and laid along the line of fence, with the green ſide undermoſt, if it chances to be leas: the thorn muſt be placed on that ſod; and the firſt ſpading of the dunged or limed ſurface all raiſed, and thrown as equally as poſſible over the bottom of the bank, in order that the roots of the thorns may meet with proper nouriſhment as they ſtretch along. None of the ditches muſt be leſs than 5 feet wide, and $2\frac{1}{2}$ feet deep. And after the fences are formed, paling is allowed out of the Duke's plantations, at the rate of from 7d. to 9d. per rood. It is eaſy to ſee, how preferable this method of preparing the ground is, to that which is commonly in uſe. For, though both ways may do equally well for a year or two, and on good ſoils the difference may never be ſeen; yet, on ſoils either of till or moſs, where thouſands of hedges are planted, the common manner of doing them is greatly inferior,—ſince, after paſſing the dung which had been laid at their roots, they inſtantly feel themſelves in the midſt of poverty, are ſtarved for want of nouriſhment, and, conſequently, tranſmit a ſcanty ſubſiſtence to the

ſtem

ſtem and branches. In order to ſhow the ſpirit of improvement that is going on, I can ſtate with certainty, that beſides the enclоſures which were fenced with ſtone, the pariſh of Canoby, in 1808, got from the Duke no fewer than 400,000 thorns, which, at 50 to the rood, gives 8000 roods of hedge in one ſeaſon. The ſtunted growth of hedges was but too viſible on many parts of the eſtate, before the preſent mode was adopted: but even the old hedges, under ſeveral of the tenants, are now renewing their youth, by the judicious care they are taking of them. The gaps are filled up with ſtrong old thorns; the back of the fence is dug and turned down; a plentiful doſe of lime, or dung, or both, but eſpecially of dung, is applied; and the conſequence is, that, in two or three years, the moſs that overſpread the branches diſappears, and they aſſume as healthy an aſpect as ever. As economy is ever the object of the farmer, ſeveral of them have had the expenſe of this operation more than covered, by planting potatoes at the ſame time, either on their own account, or for the benefit of ſome poor family, to whom the taſk was committed. Indeed, the potatoes were found to haſten the proceſs of reſtoration; for the ſtems and leaves, by covering the ſurface, deſtroyed the weeds, and afforded that richneſs to the ſoil, which a luxuriant green crop is known to beſtow. I am unable to ſay preciſely what extent of land this recent ſyſtem of encloſure comprehends. But, from minute and accurate *data*, I can ſtate, that the new encloſures in Selkirkſhire alone, amount to within a few acres of 5000 Engliſh; and that, at a time when materials and labour were cheaper than they are at preſent, the expenſe of enclоſing and liming theſe acres, and the expenſes which the farmers would be at during the exiſting leaſe for the buildings that were either begun, or propoſed by themſelves to be executed, were calculated at rather more than thirty thouſand pounds: all of which will be defrayed by themſelves. What an immenſe inveſtment muſt thus be made in the ſoil, over the whole eſtate! And how rich a fund has affection and integrity drawn from the pockets of grateful and confiding induſtry!

A *third* branch of this ſyſtem is the *rotation of crops* which the Duke preſcribes to his tenantry. On this he is very liberal; for the only reſtraint he impoſes is, that they ſhall not take two white crops in ſucceſſion; and that their lands, after lying out in paſture as long as they pleaſe, ſhall not be laid down for paſture again, till they have undergone the uſual rotation of corn, green crop or clean fallow, barley or oats, and graſs-ſeeds.

Small Plantations form a *fourth* branch of the Duke's ſyſtem; and, in the plans made out for, and delivered to his Grace, theſe are diſtinctly delineated. The banks of rivulets, coarſe pieces of

land, belts within the ring-fence, ſo as to encloſe the whole cultivated grounds, or ſtrips of planting between the enclоſures, for the purpoſes of ſhelter, are ſeverally adopted according to circumſtances; and, in marking out the enclоſures to the tenantry, theſe are always diſtinctly ſhown; the farmer being bound to make one of the ſides of the fence, and the Duke the other, when the plantation is made; but, till that is done, the ground may be uſed in whatever way is judged by the tenant to be moſt for his advantage. The uſe of theſe plantations on the ſeveral farms is obvious. They not only give beauty to the landſcape, an additional warmth to the ſoil, and ſhelter to the cattle; but, in the courſe of time, will ſupply the woods that are cutting down, and give to the farmer the timber he needs, at his own door.

But proper enclоſures and proper rotations are altogether ineffectual, unleſs care be taken to keep the rivers within their proper limits, eſpecially near their ſources, where vaſt quantities of ſand are conſtantly forcing them to change their courſe. Accordingly, this forms the *fifth* part of the Duke's plan. Every one knows the waſte of ground which ſuch frequent changes naturally occaſion. The plough muſt keep at a reſpectful diſtance, leſt the next flood ſhould deprive the farmer both of ſeed and ſoil. Hay can never be looked upon as a certain crop; for it is often either ſanded or ſwept away. And, ſhould ſheep be tempted by the deep verdure that ſuch top-dreſſings of mud commonly produce, they too often do it, to their certain deſtruction. In ſuch a caſe, then, the common expedient has uniformly been, to raiſe embankments to confine the water: but embankments alone have been found to be ineffectual, ſo long as the channel remained unſtraightened. Accordingly, the Duke, with his uſual penetration, recommended it to the tenants of thoſe farms, at the head of Eſkdale eſpecially, where the grievance was chiefly felt, to cut the channels which had given them ſuch diſturbance, and thereby procure for themſelves a laſting good. It is the peculiar excellence of the Duke's ſyſtem of management, that recommendations from him are equivalent to laws, and are eagerly executed by the farmers, although the expenſes of ſuch improvements are defrayed by themſelves. In conſequence, therefore, of this recommendation, three very conſiderable cuts have been made at the heads of the Black and White Eſks: one at Kilnburn, on the farm of Twiglees, of 102 roods in length, 16½ feet wide, and 3 feet deep at an average; with an earthen embankment at ſome diſtance to confine the water in times of flood. One at Garwald of 132 roods in length, 15 feet wide, and 3 feet deep at an average, with an earthen embankment, where neceſſary, of the ſame kind as the former. And one at Nether Caſſock and Fingland, of 327 roods in length, 12 feet

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wide at top, 9 feet wide at bottom, and 3 feet deep: But as this cut was conſidered to be much too narrow for containing the water, 6 feet more on each ſide of it were agreed upon to be bared of its ſurface, in order to be worn away by the floods; and a large ſloping embankment, at the diſtance of 15 feet further out, on either ſide, was erected to confine the water. This embankment is 8 feet wide at the baſe, 3 feet high, 1½ feet broad at the top, and 1½ feet of ſlope on the inſide, for every foot of height. It is needleſs to fatigue your readers with an account of the expenſes of all theſe; but I may mention the laſt, as another inſtance to the many I have already given, of that unlimited confidence which exiſts between the Duke and his tenantry. The original expenſe was 278l. 10s. 3d.; but, on account of the nature of the channel, which is partly clay, and partly ſand, the whole expenſe of making and repairing has been no leſs, at this moment, than 568l.; all of which (except 150l. which the Duke, in conſideration of the greatneſs of the undertaking, gave in aid of repairs) was defrayed by the tenant of Nether Caſſock, on the one ſide, and the tenants of Fingland and Over Dumfedling on the other. For the Duke's rule in ſuch caſes, is, that if the matter lye between his own tenants, they ſhall each of them pay a half; but, if between him and another heritor, the tenant ſhall pay nothing; the two heritors taking it upon themſelves. Accordingly, when 48 roods more were added to the lower end of the original cut, by the tenants of Over and Nether Dumfedlings, on the one ſide, and an adjoining heritor on the other, they paid nothing,—the matter lying between the Duke and that heritor. It is ſcarcely poſſible to ſay how much benefit may be derived from well executed improvements of this kind. In the caſe of Nether Caſſock and Fingland Haugh, this cut, of 375 roods, or a mile and a quarter long, beſides the good it hath done in keeping in the fleet water at the lower end, from the parties concerned there, has ſaved 60 acres to the above mentioned farms, which were wont to be overflowed every year; and were ſo ſour and ſpongy in many places, as ſcarcely to allow a perſon to tread upon them, without ſinking to the knee, even in the middle of ſummer. To Nether Caſſock, eſpecially, it is peculiarly valuable; for, being a high lying farm, without any conſiderable quantity of low ground, it affords grain for the family, at leaſt in part; ſome turnips for a part of the ſheep, and hay for the reſt, in times of ſtorm; thereby preventing them from flying to Annandale.

Sixthly, On ſo very extenſive an eſtate as that of his Grace, it is naturally to be expected that there are many places which ſtand in need of *draining*. This, therefore, the Duke has kindly provided for; ſince every tenant, by applying either to Mr Keir

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or Mr Stevens who has the charge of the water-meadows, the draining of all grounds not paſtoral, and the ſtraighting of rivers, may receive the advantage of their long experience. And to perſons who defray the expenſe of ſuch improvements, this is no ſmall advantage; for, although ſome may have a natural turn for theſe things, there are others who are greatly ignorant of them, and may ſpend money to little purpoſe. One general rule, in all ſuch operations, commonly is, not only to make the drain in ſuch a direction as to catch and carry off the water, but to get, if poſſible, into the ſand, the ſtratum where the water uſually runs: Nor is this ſo difficult as many imagine; ſince, in thoſe caſes even which want level, the ſand can commonly be got at, either by an auger, according to Elkington's method, or by digging little pits, and filling them afterwards with ſtones. Thus the water riſes up into the drain, and the cure is as complete as if we had driven a level along the ſand. It is aſtoniſhing to ſee the effect which a well executed drain of this kind immediately produces. The ſide of the pot which contained the water, and, by forcing it to overflow, thereby made the ſurface a perfect moraſs, is thus pierced near the bottom; the water obtains a free outlet; the ſurface-drains, if there were any, become inſtantly empty; a compreſſion of the ſoil is viſible; and the plough can commence its operations with ſafety. In the jocular but pointed language of Johnſton, the pupil of Elkington, when we were admiring the effect of his art, 'Why all this wonder?' ſaid he; 'by inſerting a cock and key into the end of a barrel, the ale ceaſes to appear at the bung.'

In vain, however, are lands either enclosed or drained, unleſs the means of producing improvement are either near, or rendered accessible by good roads. This, therefore, formed the *ſeventh* part of the Duke's plan. In Canoby, where he is the ſole proprietor, he had done ſo long ago. Coal and lime are there in abundance, and excellent parish roads have been made in every direction. Liddisdale, Eskdale, Ewisdale and Wauchopedale, all apply to these for comfort within, and improvement without. In Tiviotdale, lime is at a great distance; but they have plenty of marl in every moss almost that they choose to drain. The richly improved barony of Eckford and Lempitlaw, which lies in the neighbourhood of Kelso, derives its proportion of calcareous matter partly from the marl moss at Eckford, and partly from the lime-kilns in Northumberland. Those about Selkirk have marl in abundance, and lime, if they choose it, from Lothian; but this last is considered as expensive. The only farms, therefore, on the estate, which felt themselves excluded from the general benefit, were those in the upper end of the parishes of Etterick and Yarrow; but the late survey hath supplied in part that defect; for

for great pains were taken by Mr Keir in searching for marl. None was found in St Mary's Loch, or the Loch of the Lows, but plenty in Kingside Loch, on the farm of Buccleuch, from whence the Duke derives his title.

Such is the nature of the plan which was intended first to ascertain, and in the end to produce, the *maximum* of improvement in the hitherto unimproved parts of his Grace's estate. Its leading features are,—the erection of ring-fences to divide the sheep-pasture from the arable ground,—the subdivision of the land within these into suitable enclosures,—a proper rotation of crops,—planting either around the ring-fence, or among the fields, for the purposes of beauty, shelter and subsequent utility,—a defence of the enclosures from the adjoining rivers, by straighting and embankment,—draining of the places that have a superabundance of moisture,—and providing, where it could be done, the different farms with plenty either of lime or marl.

To those who know the alacrity which the Duke's tenantry in general show in executing what they understand to be his Grace's will, it will readily be thought, that nothing further was requisite than the regular exhibition of these before them. But the Duke possesses delicacy as well as sagacity: he is unwilling to single out and give particular directions to the selfish and indolent; and therefore, by the adoption of general rules, he endeavours to obtain that by emulation, which others can only obtain by fear. Accordingly, what may be considered as the keystone of the building we have been endeavouring to describe, is the happy contrivance of *parochial overseers*, commonly chosen from the poorer tenantry, who, for a reasonable consideration, and the opportunity it gives them of being known to his Grace, readily undertake the task required.

The duty of these, indeed, is not difficult, but it is important. For, in the *first* place, they have each a book of sketches made by Mr Crawford, of the different enclosures within the ring-fences, of all the Duke's farms in the parish where they reside; the old enclosures marked with black, and the new with red, with the number of acres contained in each. From these, Mr Crawford having gone over the ground, and pitted them out in their presence, they are to take care that the pits be preserved, or a line that had been drawn by the plough kept visible, till the farmers are able to overtake the enclosing. *2dly*, When the farmers are to enclose, these overseers take care that the ground be prepared for the hedge, on the line, and in the manner formerly mentioned; after which, they give an order on the Duke's gardener at Langholm, or on some other authorised person, for the requisite number of thorns. A *third* duty of these overseers is, to see

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that all the hedges within their district be cleaned twice in the year, till they are a complete fence, and that the ditches and dikes shall not be destroyed by cattle or otherwise; and a *fourth*, which is indeed of vast use in districts beginning to improve, is to fill up, every year, a table which accompanies the sketches, and contains the number of enclosures on each farm, with the simple notification of the crops that the farmer has upon them for the year;—the intention of which is, in the first place, to stir up the indolent; and, in the second place, to show his Grace, at one glance, what advancement they are making towards a good system of management, that, when the end of the lease comes, he may know with accuracy how to appreciate their degrees of industry.

It is not for me to say, whether the plan that has been adopted by his Grace should be followed by other extensive proprietors; but I am certainly entitled to assert, that upon his estate it has done, and is doing much good. For, in the 1*st* place, it has raised, among the persons for whom it was intended, a spirit for improvement which never did appear before. Many thousand pounds have already been expended, and a great many more must necessarily be spent, before the projected improvements are finished. Those only who have examined the plans, and counted the acres, can have a probable guess as to the full amount. *2dly*, It has changed, and is changing every year, the face of the country wonderfully to the better; giving it an improved aspect, which, while it gratifies the traveller, will, I trust, be profitable to the farmer. Let any one who knew Liddisdale, Eskdale, Etterick, Yarrow, and the Duke's farms at the head of Tiviotdale, about ten years ago, but take the trouble to visit them now, and he will see the truth of my observation. In the *third* place, this plan of improvement laid down by his Grace, prevents those from throwing away their money in unprofitable enclosures, who are willing to improve, but unacquainted with the best manner of doing it. They see what the proprietor expects, and are at liberty to begin with whatever part of the plan is most for their advantage; only, the Duke insists that they shall not alter, on their own authority, what he has been at so much pains and expense to get executed. *Lastly*, It appears to me to be a system founded not only in wisdom, but in benevolence; for it is far from the Duke's mind to wish, that any of his tenantry should improve his estate to their own hurt. He only expects that the wealthy shall show a willingness proportioned to their ability; and that the individuals who unfortunately have litte to spare, shall execute by degrees, as they conveniently can. Nor should any complain because the improvements marked out for them may chance to be considerable; for, if they really deserve the name of improvements, they must in the end

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be profitable to the farmer: and I would submit it to their consideration, whether it would be more for their interest that the Duke should continue them at a certain rent, and receive the rest in the form of improvements; or exact, as too many do, the whole in the form of rent, and leave them to improve or not, as they please.

But I have trespassed too long on the patience of your readers. In another paper, I shall finish the plan I had prescribed to myself. And, in the mean time, am, &c. W. B.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

Letter from the West Highlands.

SIR,

BEING by trade a farmer, I consider myself in honour bound to encourage any mean likely of proving useful to the occupation, which of late owes much to the press. There is scarce an agricultural publication of merit, therefore, but I consider having so much claim on my patronage, as induces me to purchase a copy. To this tribute, which, I think, I and every other person, in their respective avocations, owe to genius, you are indebted, for my first acquaintance with your Magazine; and I have the pleasure to confess, that my zeal has not often been better rewarded. But prefaces of this kind occupy too much of your valuable paper; though a young correspondent feels delicate of introducing himself, or his subject, without a preamble of this nature.

Looking daily at the Hebrides, and living perpetually under the influence of the Atlantic, where the spirited agriculturist is for the most part checked by climate, and other local circumstances, from expensive or permanent improvement, perhaps I may be little indebted to such of your correspondents as have filled my head with the comfort, and, on the whole, great saving of a substantial and convenient farm-steading. That I would propose exactly any of the two kinds, of which you have presented me with a drawing, if I could command them, is not my ambition; though, methinks, I have a plan in my head, suitable to my uses, and the site in which I would build it, and which, if encouraged, I may communicate to you by and by, unless I see another able hand continue the subject; for I conceive an article of this kind so important, that I would like to see a third, or even a fourth plan. If I were to admit these inferior to those already presented, still something might be culled from them to suit particular situations.

Let me say, that the construction of article 73. in the last plan, viz. *a flue kiln*, (*vide* vol. VIII. p. 278.), is not fully comprehended by me from the drawing, having never seen one; and the table of references does not explain it. I admire the smallness of room required

required for it, if equal, in extent of design, to the rest of the plan; also, how it can be safe for the contiguous buildings to have it so near them. I purpose building a kiln next year, and will consider myself indebted to the writer of that article, if he explains, through the medium of your Magazine, this part of your plan; also to him, or to any other of your intelligent correspondents, for hints on corn-mills in general.

Allow me to confess myself much obliged by his cheap floor for a hay chamber. If some clay-dust should stick to the hay, in consequence of it, and be thereby conveyed into the stomach of a horse, I fancy it would not prove prejudicial.

In this part of the island, we are improving fast in our accommodations, but chiefly in forming and constructing new roads and bridges, which are the groundwork of all improvement. In the executive part of operations, we have mended considerably; for, in place of turning our land with an instrument, not to be compared to a plough but by the name, drawn by six oxen, or four horses and a driver, with another man keeping pace to the ploughman, whose sole work was to watch the furrow with his foot, lest it returned to its place again, and one or two men to adjust, with a crooked spade, any baulks or errors committed by those who preceded him, all is now performed by one man and a pair of horses with Small's plough. We have also exchanged our creels and sledges for single-horse carts, and even got our wooden harrow-teeth exchanged for iron ones; which barter, I conceive, enables us, of itself, to afford 20 *per cent.* more for our farms. Good fences are valued among us, in place of feal dikes, which proved a perpetual labour, and no security. The greatest waste of our time, now-a-days, seems in the article of thrashing, and none of us have employment sufficient for the expense of your large thrashing machines. The Highland Society of Scotland, however, I perceive with satisfaction, are fully aware of this defect; and I fain hope they will discover a radical cure by a small machine, which they say, in some of their minutes, is understood only to cost from 20*l.* to 30*l.* I, as well as perhaps many others of your readers, feel interested to hear of their progress in this discovery; and subscribe myself your obedient servant,

West Highlands, 17th October, 1807. N. N.

FOR THE FARMER'S MAGAZINE.

Remarks upon the Draft of a Lease, inserted in Farmer's Magazine, No. XXXIV.

WERE all cultivators of land also proprietors, there would be no occasion for that artificial contract between one man and another, called a Lease. By combining in their own persons the separate

parate and independent interests of landlord and tenant, that particular kind of tenure which, in modern times, serves to bind these two classes of men together, would, in that case, be totally unnecessary. It is because land, as a species of property, has come into the hands of one set of individuals, and the cultivation of it fallen upon the shoulders of another, that a deed of this kind has been introduced into practice.

As long as land belonged to those who cultivated it, the proprietors of the soil were, of course, interested in its good or bad cultivation; because they were gainers or losers in proportion as it was well or ill cultivated. When, however, the property of the land and the culture of it, came to be divided between two orders of men, that interest, which in the former case was but one, now branched out into two. The bad cultivation of the tenant might, by this new distribution of things, prove ruinous to the landlord; and the stupid policy of the landlord might, without benefiting himself, retard the prosperity of the tenant. A deed, therefore, which would preserve entire to these two classes of men their respective rights, became absolutely necessary, the moment the separation I have been speaking of took place in society.

It may most naturally be imagined, that a proprietor of land will cultivate it in the best possible way; at least his errors will be those of the head, not of the will. From the circumstance, however, of the interests of the landlord and tenant being apparently opposite in every thing, and certainly so in some particulars, it becomes no easy matter to reconcile them. The difficulty is, to preserve the rights of the proprietor inviolate, without oppressing the tenant; and to leave the latter as free as possible, without injury to the former. To do this, requires a greater degree of agricultural knowledge, and liberality of mind, than perhaps we have hitherto attained; but it is some consolation to think, that we are nearer the goal now than we were twenty years ago. In time, it is to be presumed, that this most desirable object will at length be accomplished.

The public are, I think, much indebted to you, for introducing into your Magazine, (Vol. IX. p. 182.) the draft of a Lease therein given; not on account of any very particular merits possessed by the deed itself, but because it may be the means of turning the attention of your agricultural readers to the discussion of a subject of the first importance to the prosperity of the country. It will, I hope, have the effect of drawing such observations from your enlightened correspondents, as will be the means of putting this kind of tenure upon a more satisfactory footing than it is at present. With the view of contributing my small mite to so laudable a purpose, I trouble you with the following remarks, which occurred

occurred to me when perusing the above draft of a Lease. If I shall be so successful as to expose one error, or to add one truth to those already known, I shall feel myself more than repaid.

I shall consider the different clauses in their order; and I must request of the gentleman by whom it is said to have been framed, not to be offended with the freedom of my remarks. If he be a person of the description mentioned, I make no doubt but he prefers truth to every thing personal to himself; and will rather pardon a transgression against good manners, than against good sense.

I am truly sorry to find in this Lease, the clause 'secluding assignees, whether legal or conventional, and subtenants of every description;' because I was sanguine enough to have hoped that a contrary example might have the effect of banishing altogether, in a short time, so impolitic a condition. As I consider the power to subset and assign as of great importance to the tenantry and to agricultural improvement, I shall endeavour to obviate in this place every possible objection to the freedom here contended for in favour of the cultivators of the land, *in so far as the interest of the landlord is concerned.* The arguments in favour of the same principle, *in so far as the interest of the tenant is concerned*, have been already so fully and so well stated in a former Number of your Magazine, as to render any thing additional totally unnecessary.

It is not enough to say, that a landlord has the right to exclude assignees and subtenants; because, if that be all he has to say for himself, it would be a waste of time to argue with a man who is predetermined against the opposite doctrine. What I am going to state, relates to the impolicy of the exclusion in question; and if I can show that it is positively injurious to the landlord himself, then he ought not, upon that account, to exercise a right by which he has suffered so long. It is needless to show that the exclusion is injurious to the tenant, for that is admitted by its warmest admirers; and, besides, I am fearful that landlords will not be disposed to abandon an antient prejudice, unless it can be shown to be personally prejudicial.

The entire argument of the landlord in favour of the exclusion of assignees and subtenants, is contained in the *delectus personæ* of the tenant, to whom they originally let the lands. At the time the lease was granted, they took care, they say, to deal with an excellent tenant; but, if he be permitted to assign or subset, they may be saddled with another of a very different kind; and, of course, not so well off as before. Supposing a tenant to be every thing which a landlord can desire, it is probable he may die before the expiry of the lease; and, in that case, instead of the matured talents of the father, he may have to content himself with the ignorance

norance and inexperience of the son. In the event of the death, therefore, of the original tenant, the landlord may suffer as severely, if not more so, than if assignees and subtenants were admitted to the utmost extent. In truth he suffers more; because, by reason of that sort of physical subset, he is deprived of the responsibility of the first tenant, while, on the other, he has him bound hand and foot, notwithstanding of the assignation. It is wonderful, therefore, that the landlord, who, long ago, seemed to imagine that every thing beneficial to the tenant must, of necessity, be injurious to himself, did not insist upon a forfeiture of the lease taking place upon the death of the original tenant, upon the ground of the *delectus personæ*. The hardship suffered by the heir would be no censure to this cruel exercise of his right, if he considered it for his interest to put it in practice. But, had the landlord pushed his love of the *delectus personæ* as far as to exclude heirs, he would do a manifest injury to the tenant as well as to himself. The injury done to himself arises out of that done to the tenant; and, as it has been shown over and over again in your excellent Magazine, that the exclusion of assignees and subtenants is prejudicial to the tenant, it may be safely inferred to be injurious, in some measure, to the landlord himself.

I shall not deny, that, upon the supposition of a power to subset and assign, a landlord may, in the room of a good tenant, get a bad one. The case is very possible; but the reverse is as much so; and here, the doctrine of chances leans as much to the one possibility as to the other. But, upon the first supposition being the fact, what is the amount of the injury sustained by him on account of this change of the individual? The rent is continued to be paid as regularly as before, because the original tenant remains bound, notwithstanding of the assignation, for performance of the pecuniary obligation. So far, therefore, as the payment of rent is concerned, and that with landlords is the principal consideration, he is not a whit worse by the change. It may be said, however, that the subtenant is not so enlightened in his profession as the principal; and, in proportion to the amount of that difference, the landlord will be a loser. To this I answer, that in the present rapid career of agricultural improvement, a new tenant is as likely to be the best farmer of the two. But supposing that he were, in reality, inferior, what is the amount of the loss sustained by the landlord by reason of this alleged inferiority? With regard to the performance of every stipulation in his lease, such as that of a particular mode of cropping or management of the land, by which it is supposed to be improved; and with regard to every obligation upon the tenant contained in the tack, he is just as well off with the assignee as with the original tenant, or, perhaps, much

better; because both are bound. Indeed, by the interposition of the assignee between the landlord and the original tenant, it becomes the duty of the latter to keep a sharp look out after the subtenant, that he performs all the conditions of the lease. So far, therefore, as the written lease goes, the landlord is as well off, if not better, after the change, as before it. But it may be urged, that a bad tenant will do no more than what he is obliged to perform, while a good one will voluntarily, and *con amore*, perform a great deal more. To this it is sufficient to answer, that a landlord can expect no more good to come out of a lease than what is within the four corners of it; and, therefore, he can take no credit for a thing which is merely accidental, and entirely optional to the tenant, to do or not as he thinks proper. Besides, if landlords shall continue to persist in the exclusion of assignees and subtenants, the tenants here supposed to be good, will take care to perform no more than what bad ones are conceived to do; and, by that means, proprietors will cease to enjoy the smallest benefit from this boasted *delectus personæ*.

In feudal times, a vassal could not dispose of his land without the consent of the superior, from whom it is supposed to have originally emanated. In the 19th century, landlords, acting upon the same barbarous principle, would prevent tenants from exercising the right of disposal. The vassal could not sell his permanent interest in the land to another; and the tenant is not permitted to bring to market his temporary possession of the soil. The prevention of a sale by the vassal was founded in common sense, namely, the support of the power of the superior, which fell to the ground the moment it was brought to the hammer. The exclusion of assignees and subtenants by the landlord, was with the view of promoting his own interest, by keeping upon the land the person to whom it had been originally let. The intention of the feudal chief and the more modern landlord was just the same; but the latter has not so good an excuse. His interest will remain unimpaired, notwithstanding of the permission of assignees and subtenants; and, therefore, he ought to abandon what is unquestionably injurious to the tenant.

The *delectus personæ* upon which so much stress is laid by the landlord, does not appear to me to be an object of such importance as it is fashionable to consider it. I should apprehend that it means a quality which the landlord contemplates over and above the tack that he has granted, for it is not contained within the four corners of it. This quality, moreover, is contingent and accidental; for the tenant may be of such a description, as that, instead of there being a *delectus personæ*, there may be the very reverse of it. A tack will not make a bad tenant a good one; but a landlord, at the

the beginning of a lease, will choose the best among the offerers. This may be true; but the original tenant may become as bad as any subtenant can possibly be. It is plain, therefore, that this quality of *delectus personæ* is of a most fugitive kind; and which, being voluntary upon the part of the tenant, and depending upon his life, and a thousand other accidents, cannot enter deeply into the calculations of a landlord at setting his land. The tack is all that he can calculate upon; because its contents can be enforced, and the privileges which are conferred by it upon the landlord are as ample, without the clause excluding assignees and subtenants, as with it.

In the little experience I have had in country matters, I am not aware of any material disadvantage arising to landlords from their having granted this power of subsetting. If the original tenant be a good man, he will not subset the land to an improper person, because he still remains bound for the payment of the rent, and performance of the other stipulations of the lease; and if the tenant be bad, the chance is, that the landlord will be a gainer by the change. So far as I have seen this more liberal doctrine put in practice, I have no reason for regretting its introduction. Some cases, no doubt, will occur, where a landlord may get a worse tenant than he had originally; but that is merely an exception to a general rule, not an argument against the rule itself. If the evils arising from it to the landlord be accidental and partial, even where they do exist, it ought to be permitted in every case; because the advantages of it to the tenant are certain and universal.

Although a little out of order, I shall now consider the clause which vacates the lease in the event of the bankruptcy of the tenant, both on account of its similarity to the one already discussed, and because it has given rise to some observations from your correspondent *Agricola Tertius*, upon certain sentiments of mine, in my Remarks upon Perthshire husbandry.

So far as it is a bargain between the landlord and tenant, I am very clear that, notwithstanding of its severity toward the latter, it would be found good against him in a court of law. A bargain is a bargain; and if courts of law were perpetually to interfere between parties in their adjustment, they, and not the contractors, should make them from the very beginning. What would be the use of A and B agreeing to do one thing to-day, which a court of law has in its power utterly to annul in the course of to-morrow? But the very circumstance, of its effects being in the highest degree penal, is a reason why the clause should not operate beyond the pale of the contracting parties themselves. When the interests of other people come to be affected by the

application of such a clause, it is very natural for Judges to pause, and consider how far its destructive influence ought to be permitted to extend.

In the communication animadverted upon by your correspondent, I mentioned, that such a vacating clause is not by any means analogous to that excluding assignees and subtenants. For my own part, this is the first time I ever met with the former. But I know, or ought to know, that the former is, with a few exceptions, inserted in all tacks. In the event, therefore, of suffering by the clause of exclusion, I have myself to blame, in the same way as a person would be culpable, in giving credit to an heir of entail with that deed upon record. In the clause, again, vacating the lease upon the bankruptcy of the tenant, I get my fingers burnt without being aware of the danger, as the same person would be by an heir of entail were that deed not upon record. This, I imagine, may satisfy your correspondent, that there is a wide difference between the two clauses, and, of course, that any reasoning applicable to the one is not at all so to the other.

The clause excluding assignees and subtenants, is one in which the parties themselves alone are concerned, and with which, in a pecuniary point of view, the public have nothing to do. An intending tenant, when bargaining with a landed proprietor, knows that he cannot subset; and if he remains upon the land till the expiry of the lease, he is not injured by it in the smallest degree. A creditor of the tenant suffers nothing from the exclusion of assignees and subtenants; because, if he pays the debt of nature, his heir must pay the creditor. As little danger is there to the public; because they can be no sufferers in a pecuniary sum through the lease, unless the tenant has previously sustained a loss. But the case is very different with the clause in question. The tenant himself loses a lease upon which he has perhaps laid out some thousand pounds; not because he is unable to pay his rent, and perform the stipulations incumbent upon him, but because he has run into debt with other people. The bankruptcy, perhaps, is owing to the very circumstance of his having expended so much money in enriching the farm; and why should the landlord be benefited at the expense of other people?

It is said by your correspondent, that 'it (meaning the clause) is not repugnant to the statute or common law; nay more, that it is perfectly fair and proper in a moral and political point of view.' I am not lawyer enough to say, whether or not it be repugnant to the statute or common law; nor do I think *Agricola Tertius* deeply enough versed in the subject, to pronounce so very authoritatively upon a question of no small difficulty. Where there is an apparent hardship to individuals, I am charitable

charitable enough to believe, that the statute or common law does not legalize the evil; and in the present case, I would for that reason have been better pleased had your correspondent, instead of giving simply his *ipse dixit*, entered into a legal discussion of the merits of the question. I am grieved to learn from him, that what is fair and proper in a moral and political point of view, is something 'more' than the statute or common law: For I should have thought, that the law of the land would have been founded in justice. Again, I do not well understand why there should be a difference between fairness in a moral, and fairness in a political point of view; because I should think, that quality was morals, and morals politics, in the legitimate meaning of these words.

It is very true, that a bargain will in general be supported by a court of law, where parties only are concerned; but it may not be fair and proper, for all that, as a transaction, upon the part of one of the contractors. The advantage may be all upon one side, and therefore presumably not fair; but, for the sake of business, the individual must suffer for the public good. In vacating the lease on account of the bankruptcy of the tenant, the law does no more than fulfil the agreement of parties; but the bargain itself is not founded in fairness, because the effects to arise from the cause are more than what are warranted by it. A lease may very properly be voided by the inability of the tenant to pay his rent; because a tenant cannot expect to be permitted the use of what he is unable or unwilling to pay for. But, in the case of a bankruptcy, the rent is continued to be paid as regularly as before that unfortunate event took place; and notwithstanding thereof, the tack is vacated to the tenant. There seems to be something very hard and unfair to punish the tenant so severely, while the landlord loses nothing, or next to it. If the voiding of the clause be unfair *quoad* the tenant, it is tenfold so to the creditors of the bankrupt, who are, with their eyes shut, to be deprived of the only chance of future repayment. I am apt, therefore, to think, that, notwithstanding of the contrary opinion given to this gentleman by his lawyers, the Court of Session will not be disposed to support this vacating clause.

Entails are considered to be injurious to society, in so far as an heir may contract debts, while creditors get nothing in the event of his death. Now, in the present case, we have these bad effects in still a worse form; for a tenant may contract debts, and yet his creditors, in the event of bankruptcy, may be cut off without a sixpence. All the money he owes is most probably expended upon his farm, and his creditors are to get nothing; not because he is in debt to his landlord more than he is worth, but that he is over head and ears in debt to them.

It is said by your correspondent, that the intention of the clause ' is substantially the same as that aimed at by the clause excluding assignees and subtenants.' But whatever may be its meaning, it certainly accomplishes a great deal more. By the exclusion of assignees and subtenants, the heir, in case the tenant dies, succeeds to the tack, and the creditors are paid what his predecessor owed them. The tenant is merely prevented from making use of the tack in a peculiar way, and the heir succeeds to the occupation of the land, and the creditors get payment of all which they lent to the tenant. By the vacating clause, on the other hand, both the heir and the creditors are equally robbed of their last shilling.

If a tenant grants an assignation or sublease, it follows, as a necessary consequence, that he abandons his then situation; and therefore, the *delectus personæ* is violated by the conveyance. But a tenant may become bankrupt, and yet, by the creditors allowing him to manage the farm, the landlord has the same power as his tenant, and of course the *delectus personæ* remains as entire as before. By vacating the lease, however, in case of bankruptcy, the landlord inflicts a punishment upon the tenant, without his having been guilty of the crime. The fact is, he takes advantage of the necessities of the tenant, to make him pay a severer penalty than what the nature of the case requires.

It may be a matter of surprise to your readers, to find me arguing upon this side of the question, when I am quoted by *Agricola Tertius* as contending, that this clause, vacating the lease, is ' not contrary to law civil or moral.' They will find, however, upon a little examination, that this Gentleman has applied, unintentionally I believe, what I said relative to the clause excluding assignees and subtenants, to the other vacating the lease altogether. I mention this, principally to put your correspondent to rights, and to explain to your readers that there is no contradiction between my past and present arguments.

I have already noticed (says he) ' that he (meaning me) admits, in the most unqualified manner, the landlord's right to exclude assignees and subtenants; which, in my view of the case, is in every respect equivalent to an exclusion of bankrupts and their creditors; because you will please observe, every bankrupt *may be compelled to denude himself*, either by a voluntary or legal deed.' It by no means, however, follows, that because a tenant *may* be compelled to denude, that he *must* be under that necessity. I never understood, before now, that a contingency and a certainty were the same identical propositions. If the creditors of the bankrupt agree to his remaining upon the farm, about which they will take care to be at one, then the cause which is supposed to vacate

vacate the lease does not exist. To be consistent, your correspondent ought to have confined the vacating of the lease to those particular cases in which the creditors really compel the tenant to denude; because mere bankrupcy is not necessarily denuding. If a tenant grants an assignation, or subtack, then there is really and substantially a denudation by him, if the expression may be allowed. But the same effect does not necessarily follow from his bankruptcy. How then can *Agricola Tertius* say, that 'the exclusion of assignees and subtenants is in every respect equivalent to an exclusion of bankrupts and their creditors?' Or what are your readers to think of a person's logic, who reasons so very vaguely?

I remarked, that I did not think the law would sanction a clause of irritancy, in the event of a tenant becoming bankrupt, provided the rent continued to be paid. Upon which your correspondent is pleased to observe, 'I much doubt that gentleman has not fully studied the clause in the lease now under discussion, otherwise he would have viewed this matter in quite a different light.' There is here a mistake of about half a year, in point of time, into which your correspondent has most unaccountably fallen. The paper of mine from which the above quotation is made, is dated in January 1808; and the draft of the lease in question does not appear in your Magazine until the month of June thereafter. His blunder is owing to that paper having been inserted in your Magazine in December 1808, about six months posterior to the lease. But as the date of it must be gathered from that of the writing, and not of the printing, he is evidently in the wrong when supposing it in my power to have studied it. I may be right, therefore, or I may be wrong, in my ideas upon the subject; but I had not the opportunity alleged by that Gentleman of correcting the opinion I may have formed without a due proportion of previous consideration. I might follow *Agricola Tertius* through the remainder of his arguments upon this clause; but, by doing so, I should only repeat what I have already said; and therefore I shall now take leave of him altogether, and make some remarks upon a few of the other clauses of the lease.

The reservation of power to the proprietor to search for, work, &c. all the metals and minerals in the lands let, is very proper; but there does not seem to be the same necessity of reserving liberty to sell or apply the same to his own use. Without this clause, all which the tenant could prevent the landlord from doing, was the breaking of the surface of the land; and if it were possible to work the minerals, without at the same time injuring the surface, he could not possibly be hindered from selling the

materials. Now, if he could apply the metals to his own use, *without* the reservation of a power to work them, then, *a fortiori*, he could do the same thing *with* it. This reservation, therefore, of the power to sell, seems to be quite unnecessary, or not in the power of the tenant to prevent; and why reserve the liberty of doing what no person can prevent the landlord from doing? It appears to me, that the precise reparation to be made the tenant in consequence of the damage done the lands, by the working of the minerals, &c. is not accurately enough expressed. It is said, the tenant is to be paid 'for any *surface-damage* thereby done to the ground,' the word *thereby* meaning in the course of working the metals, &c. Now, the damage here condescended upon, is of a particular kind only, viz. *surface-damage*, which, strictly speaking, is the injury done to the surface of the ground merely, and nothing more. If the landlord makes a hole in the ground of a square yard in extent, then the tenant will get a deduction from his rent, in the proportion of the hole to the size of the farm. But it will be recollected, that the mere surface-damage is not all which the tenant may suffer in consequence of these operations of the landlord. Should the landlord make a hundred different holes in twenty acres of land, perhaps a superficies, equal to not more than an acre of land, is destroyed; but the remaining nineteen acres are greatly deteriorated in agricultural value. The reparation, in this case, merely for surface-damage, would not be at all commensurate to the total injury sustained. I would propose, therefore, that the word *surface* should be left out; by which means, the arbiters would be at liberty to allow the tenant compensation for the whole damage sustained by him, not only by reason of the holes themselves, but in consequence of them.

There can be no objection to the landlord reserving power to allocate such parts of the mosses as may have been in the use of being dug for peats to the other tenants on his estate; but in this case, that part of the farm lying next to the peat ground ought to be enclosed, in order to prevent the cattle of other people trespassing upon the tenant. The reasonableness of this is plain, because the tenant ought to be put in no worse a state by this power of allocating the mosses, being put into execution, than while it remained a dead letter. I have no objection either, to the landlord relinquishing the resumption of the mosses before taking possession; but as certain expenses will necessarily be incurred by the tenant in making way for this new arrangement, he ought to be reimbursed them. This is no more than fair; for if such a vascillation of sentiment is to be permitted to the landlord, he ought to be at the expense attending the non-execution of what he once intended.

It

It may be proper for the landlord to reserve 'power to make such allocations on the marches between the said lands and those adjoining, as he shall judge proper;' but that right should be carried into execution as rarely as possible. I would be better pleased if a landlord settled the marches before the entry of the tenant; because, in that case, the tenant, who has no alternative, would know much better what he was about. Instances, however, will frequently occur, in which the marches cannot be adjusted before the entry of the tenant; and in these, the power here reserved is very proper. I may remark, that the land which may be taken from the farm ought to be valued, not at the rate per acre it was originally let for, but at the rent it would let for in its present improved state. On the other hand, the ground which may be added to the farm, ought to be valued, not at its present value, but at its value at the time the tenant entered into possession of the body of the farm. Had he got the ground at his entry to the remainder, it would have been let to him at the same rent with the rest; and it would be hard to compel him to give more on account of an accommodation to the landlord. It seems to have been overlooked by the framer of this lease, that the ground added to the farm may not be in as good condition as what comes to be occupied by the landlord, and will, upon that account, require a considerable outlay to put it upon the same footing as the other. Perhaps, therefore, the landlord should be taken bound to put it in the same identical state as the other, or to allow the tenant a certain sum of money upon that head. It may be said, to be sure, that the arbiters will, in that case, put a less rent upon the land added to the farm; but I apprehend that an annual allowance is too slow a mode of remunerating a tenant for the outlay of a principal sum. It is the landlord, for whose benefit solely such an arrangement takes place, who should defray the expense of the outlay.

It may be proper for the landlord, and perhaps not substantially injurious to the tenant, to allow the former to 'assume possession of any part or parts of the lands hereby set, which the proprietor shall choose for being planted with trees; and that the tenant shall get deduction from his rent, at such a rate, for each acre planted,' provided the deduction supposed to be allowed him, be ascertained upon fair and just principles. If all that the tenant could possibly suffer by this power of planting being increased by the landlord, was the loss of a certain number of acres occupied by the trees, then the principle of the deduction is most fair and reasonable. But supposing that a landlord was to plant a variety of clumps of trees in different parts of the same field, it is plain that, in addition to the superficial loss in proportion to the

the quantity planted, the field has lost much of its arable value by being cut up by this ornamental planting. It may be for the interest of the landlord thus to beautify his fields, but evidently must be injurious to the tenant. Now, as there is here another sort of loss, not so palpable to be seen, but equally real to the tenant as the occupation of the ground by the clumps of planting, an allowance ought to be made him on that account; or, at any rate, the arbiters should be left at liberty to make him a remuneration, if they shall see cause. As the clause however stands in the draft, it is plain that a landlord may, by planting to please his own taste, injure his tenant beyond the mere occupation of the planted ground, without giving him a farthing of compensation upon that head. It may be said, to be sure, that as the tenant has consented to the clause, he cannot find fault with the landlord for any injury which may afterwards arise from its being carried into execution. This, however, may be said of any agreement whatever; and as I am persuaded it was the object of the framer of the lease in question, not merely to make it a fair deed at the time, but during the currency of the lease, he will excuse me for the observation.

I am very clear, that all the unliquidated obligations incumbent upon the tenant, should suffer no increase during the currency of the lease, but that they should be identically of the same amount at the end as at the beginning. Upon this principle I must object to the obligation upon the tenant of keeping up the fences that surround these plantations when they do not otherwise act as enclosures to the farm. It is common sense, that no person whatever should derive a benefit without paying for it; and in like manner, that he should suffer no inconveniency from the advantage of another in which he does not also participate. If all the advantage be to the landlord, as in the case of planting, all the expense attending the care of it should devolve upon him. A tenant can have no objection to pay his proportion of the expense of keeping those fences in repair, which serve to divide his farm into the necessary enclosures, because he is benefited by them; but it is unfair to compel him to maintain fences from which he derives no benefit whatever. As well might the landlord take him bound to be at one half of the expense of supporting the wall surrounding his domain. He may be certain too, that little attention will be paid by the tenant to an object which is every way injurious, and in no respect beneficial to him. It would be worse for the landlord to take this charge into his own hands; for it will in all likelihood be much better done by his own than by others.

I would not have expected from a person worthy of being a correspondent of yours, the smallest objections to the payment by

by the tenant of 6 *per cent.* upon money expended by the proprietor in building houses, and in forming fences and enclosures during a certain number of the first years of the lease. This payment, however, is characterized by a writer who signs himself X. S. in the 36th Number of your magazine, as 'a barrier in the way of agriculture.' This gentleman surely will not pretend to say that a landlord ought to lay out his money upon these particular improvements, without getting a return equal to 5 *per cent.* for money lent upon heritable security. Now, we all know very well, that 6 *per cent.* is by no means a sufficient return from houses which are occasionally in want of repairs, and still less so from fences which are infinitely more perishable in their nature. * Had the landlord been asking a per centage, which, upon an average of years, would have been more than 5 *per cent.*, there might have been some plausibility in your correspondent's argument; because, in that case, the tenant would have been giving a higher percentage than what he had got from others; but in the present case it is quite the reverse,—for he is giving the landlord less than what he gets from other quarters. If money ought to return to the landlord 5 *per cent.*, then the use of it is worth that sum to the tenant, who, in fact, borrows it. These two propositions are equally true; for the one arises out of the other, and the value of money to the one, regulates the value of it to the other. For 1000*l.* I pay 50*l.* a year to the lender, because the money is worth that much in the market; and I will, in like manner, get an equal return from the quarter I have lent it. Your correspondent, therefore, may be assured, that if the landlord be not asking more than what other people do, the tenant may give it with perfect safety; for the money will be equally productive in his hands. It has been shown, however, that the landlord is, in the present case, asking less than what others, in the same circumstances, do; and therefore the tenant is a gainer by this species of lease.

I presume it will be admitted, that a farm, with requisite houses and fences, is worth more than another without these essentials. Admitting this, and the fact cannot be denied; then it follows, that the landlord, by this increased rent, is just getting the 6 *per cent.* expended upon the houses and fences. A farm, without a house, and unenclosed, will let for a particular sum; and another property, subdivided, and a convenient steading, will let for something more. The thing, therefore, is just as broad as it is long.

If the tenant be a man of enterprize and skill, and if the land be more or less without fences, his first step would be, to enclose the whole;

* Our correspondent will remember, that the tenant is taken bound to keep up, and leave the houses and fences in a sufficient state of repair. N.

whole; for no profitable ſyſtem of management can be proſecuted in an open and unencloſed farm. Now, if the tenant lays out this money, he ſaves, to be ſure, the payment of 6 *per cent.*; but then his money is ſunk, and left behind him at the expiry of the leaſe. It is much better, therefore, that the landlord, for whoſe permanent advantage theſe encloſures are made, ſhould lay out the principal ſum; and that the tenant, for whoſe temporary benefit only they are made, ſhould pay the intereſt.

Your correſpondent talks out of the way, when he ſays, that 'the exaction of 6 *per cent.* cannot be a hair-breadth free of the ſtatutes againſt uſury.' He ought to have recollected, that this percentage is payable, not for the loan of a ſum of money, but for the uſe of a houſe and fences which coſt the proprietor a certain number of pounds. It is uſual for the owners of theſe kinds of properties to get 10, and ſometimes 15 *per cent.* in towns; and why ſhould not thoſe in the country get the ſame?

I muſt, however, differ a little with your correſpondent, '*Agricola Tertius*,' in ſo far as he ſays, that the money thus expended by the landlord upon houſes and fences, is 'not lent, but ſunk; in moſt caſes, I believe I may add, irrecoverably ſunk.' Were it the tenant who laid out the money, it would be, to all intents and purpoſes, ſunk; for whatever advantage he might derive from the improvements themſelves, the principal ſum, in the ſhape of houſes and fences, would be left upon the ground at the termination of the leaſe. In the preſent caſe, however, the money is laid out by the landlord, who, at the end of the leaſe, finds the money expended by him lying in a tangible ſhape upon the land. It is plain, therefore, that he has fallen into a miſtake, by ſuppoſing that the money was laid out by the tenant, which it is not, inſtead of by the landlord, which it is.

It may be very true, that 'ſubdiviſion dykes and fences (as ſtated by X. S.), from their general conſtruction, do not ſufficiently anſwer all the purpoſes intended at firſt. Generally, a clap dyke, with a hedge and ditch, are not a ſufficient fence for the firſt five years, even when properly managed;' and therefore he argues, that, at all events, the tenant ſhould not begin to pay this 6 *per cent.* until they be fully grown. In anſwer to this, I have to remark, that, if money, in lending, be worth a certain return to the lender, it is worth juſt as much, in the borrowing, to the borrower. It will be admitted, that 6 *per cent.* is by no means too high a return to the landlord; and therefore it is not too much for the tenant to pay. If the tenant is not to pay a percentage until the fences are five or ſix years of age, then he would have to add to this 6 *per cent.* the intereſt of the accumulated arrears of that period, which would raiſe it to 7 or 8 *per cent.* Fences, the firſt year of their being

being planted, are worth, we ſhall ſuppoſe, 600l., and, after the expiry of ſeven years, 1200l.. For the former, the tenant will have to pay 36l. a year, and, for the latter 72l., which is in reality the ſame rent in both caſes. But your correſpondent would like to pay only 36l. for the latter, which would afford a return to the landlord of only 3 *per cent.*

It may be very true, that a tenant, during the infancy of the fences, derives little advantage from them; but if the leaſe be for nineteen years, your correſpondent ought to have been candid enough to have allowed, that, before the expiry of that period, he will be benefited by them. Why will he ſay, that theſe improvements will be enjoyed by another tenant, when, out of nineteen years endurance, he will, by his own confeſſion, have the benefit of a fence for fourteen years? If the landlord be to wait 'till the improvements become productive, and then aſk a conſideration proportionate to their annual value,' what better will the tenant be? becauſe, as the landlord muſt, within the nineteen years, get the 6 *per cent.*, the other will, in that caſe, inſtead of paying that percentage from the beginning, have to pay perhaps 12 or 15 *per cent.* from the time 'theſe improvements became productive.'

I would wiſh to ſee no clauſe in tacks but what is purely agricultural; and we find that clauſes of a different tendency are wearing out every day. Upon this principle, I would have been glad had there been no ſtipulation as to the tenant 'furniſhing the carriages of the whole materials that may be laid out upon building or repairs upon the premiſes.' I do think, with X. S, that it favours a little of the barbariſm of the dark ages, and what I would not have expected in a draft of a leaſe in the 19th century. It has the effect alſo of diſtracting the attention of the tenant at a time when it ought to be directed excluſively to the improvement of his land. I cannot think, with '*Agricola Tertius*,' that a tenant will drive the materials for building cheaper than any other perſon; on the contrary, I believe that profeſſional people, for very obvious reaſons, will afford to do it at a lower rate. We know, that the diviſion of labour is one cauſe of its cheapneſs; but here, the multiplication of it is ſuppoſed to have preciſely the ſame effect. If the tenant be a man of ſenſe, I am confident he will find no leiſure for the performance of extraneous work, and, of courſe, to become a carter.

I know ſome people who have blended the two profeſſions of farmer and carter; but I have always found them bad both at the one and the other. It is very difficult to make one's eyes look in oppoſite directions; and impoſſible to ſerve both God and Mammon. I am, &c. A CONSTANT READER.

FOR

FOR THE FARMER'S MAGAZINE.

Report of a Process relative to the Right of a waygoing tenant to remove the Appendages of a Thrashing Machine, lately decided by the Lord Ordinary of the Court of Session in Scotland.

At this day it is unnecessary to urge one word in favour of the Thrashing Machine, the utility of that implement being now universally recognized. The erection of thrashing machines has, however, occasioned some questions to be agitated, not hitherto discussed in our law courts; and, as a decision has lately been given, which must be a leading one, on a point materially connected with the success of agricultural machines, we trust that a detail of the arguments used on both sides, will be useful and acceptable to our readers.

The antient law of Scotland, with regard to what is called fixtures on a farm, was very strict, and, perhaps, unnecessarily severe, because farmers were thereby discouraged from making substantial or expensive improvements upon the buildings possessed for a limited term. When thrashing machines were first erected, proprietors, in general, became convinced of the necessity of departing from the antient rules, at least in so far as they were applicable to machinery. Hence no attempts have been made to detain machinery, even when fixed in the most decisive and durable manner; and the waygoing tenant, in every case within our knowledge, has been permitted to remove the whole, or to dispose of the same to his successor. This conduct was wise and judicious, because the tenantry were thereby stimulated to erect thrashing machines, from a sense that they would, one day or another, procure value for them at the conclusion of their leases. In fact, thrashing machinery is now considered to be as much the property of the tenant who erected it, as a pair of fanners, or any other implement employed in executing farm business.

Though this has been the uniform practice with regard to those parts of the machine constructed by the mill-wright, yet doubts have been entertained concerning the outgoing tenant's right to remove certain other articles characterized as appendages of the thrashing machine—articles without which it could not be worked; and though, strictly speaking, not machinery, yet as much necessary in executing the process of thrashing and cleaning corn, as any branch or portion of the implement. Owing to these doubts, the tenant's right has, in three or four instances, been investigated in the inferior courts; but the decisions pronounced being of a contrary nature, the point was by no means satisfactorily ascertained till last winter session, when a judgment was pronounced, which fully establishes the tenant's right to remove the

the several articles afterwards enumerated. This being a subject of great importance to the tenantry of Scotland, the arguments used in the inferior court shall be fully detailed.

The leading particulars of the cause are as follows.

At Whitsunday 1808, a farmer in East Lothian, whose lease had then expired, disposed of his thrashing machine to a neighbouring farmer, at an agreed price; but, in removing the machinery, was opposed by the incoming tenant, who considered that certain articles, such as the large beams in the horse-shed, which guide the horse-wheel, the lofts, partitions, &c. were fixtures; therefore could not be removed, according to the law of Scotland. The outgoing tenant, wishing to have the point decided, presented a short petition to the Sheriff-depute of the county, merely stating the facts, without argument. Answers were ordered; and the following is, in substance, what was stated in favour of the claim of the incoming tenant.

'The question now to be submitted for your Lordship's determination, appears to the respondent completely free from intricacy or dubiety; and he flatters himself, that it will be unnecessary for him to consume much time in clearly showing the futility of the plea by which the petitioner can reasonably expect to meet with success in his present application.

'It may not be improper to mention, that the respondent succeeded the petitioner in the farm of —— ——, after the latter had possessed the same for a period of twenty-nine years; in the course of which, he had erected a thrashing machine upon that farm, for his accommodation, and for the purpose of cleaning and dighting out the grain produced on the lands. The respondent's entry to the farm was, as to the houses and grass, at Whitsunday 1807, and, as to the arable lands, at the separation of the crop from the ground; and his lease contains an assignation to that clause of the petitioner's tack which obliged him, as outgoing tenant, to leave the houses, &c. in the state of repair thereby stipulated.

'Your Lordship will please keep in view, that the respondent has not, in the most distant manner, opposed the petitioner in removing the whole thrashing machine and its relative articles of machinery, whose right, in that particular, the respondent does not mean here to dispute; and, had the petitioner's claim stopt there, the present *judicial combat* would not have arisen. But, besides this, the petitioner maintains a plea, that he is entitled to pull down, carry away, and remove, the whole *joists*, *flooring*, *partitions*, *beams*, &c. which form part of the *barn* wherein his thrashing machine was erected; a plea which, with deference, is not only ridiculous, but is in direct opposition to law,—in direct

opposition to decisions pronounced in similar cases, both in this, as well as in other counties,—and also in opposition to established and received custom on the point; so, while the respondent thus resists the giving effect to such a plea, he does so, impressed with the fullest confidence of being supported in his defence, by obtaining an absolvitor from this action, with full expenses.

'The petitioner alleges, that "he is prevented by —— —— the incoming tenant, from removing the loft and partitions of said mill, with the beams of the horse course, *which are appendages of the machinery*, under pretence that they belong to the farm, and not to the petitioner, although they were erected by him;" or, in other words, the petitioner complains against the respondent for preventing him from pulling down, demolishing and carrying off, certain articles of repair which had been bestowed on part of the premises now occupied by the respondent, while these premises were in possession of the petitioner, and that for the latter his better accommodation. The petitioner seems rather aware, that his claim can only extend to the thrashing machine, and not to the *flooring*, *joisting*, &c. of the barn within which the same was erected; for he pointedly states, with the view of forming an affinity between these articles and the thrashing machine itself, that these articles "are *appendages* of the *machinery*." But the respondent is truly at a loss to comprehend how the *floors*, *joists*, *partitions* and *beams* of the barn on his farm of —— ——, can be denominated an appendage, or less principal part, or, indeed, any part at all, of the *machinery* belonging to the petitioner's thrashing machine; and he is persuaded it will require a good deal of argument and ingenuity, in even an attempt, to satisfy your Lordship of that being the case. Surely, if the petitioner means seriously to insist on his present claim, it naturally occurs he will fail, satisfactorily, to show that, without each particular piece of joisting, partition, &c. of the respondent's barn, alleged by him to be appendages of the machinery of his thrashing machine, the machine will not work, and will be rendered useless, before he can look for a decerniture in terms of his petition.

'The joisting, flooring, beams, &c. now demanded by the petitioner, are firmly and strongly united and built into, and form part of the barn, and cannot possibly be pulled down or removed, without the most serious damage to the building, nay, probably, without almost totally destroying the same. At all events, these being *fixtures* in every sense of the word, and a permanent improvement, the respondent contends that the petitioner has no shadow of right, either in law or practice, to pull down or carry them off, these being held and considered as immoveable. Were the

the petitioner's present plea at all regarded, he might, with the same good grace, maintain a right to remove and carry away the materials of the shed covering that part of the machinery on the outside of the barn, which was also erected at his expense.

'Having made these observations, the respondent will now proceed to notice such decisions as are within his knowledge, and, in his humble apprehension, bear upon the subject matter now under discussion, some of which are exactly in point. In the first place, then, the respondent will beg leave to call your Lordship's attention to the question, Whites *ag.* Sir John Houstoun, 20th December 1707, which, in its merits, so far as regards removing fixtures, has some analogy to the present. The case is in the Dictionary of Decisions of the Supreme Court, (vol. XXV. p. 15,258.) lately published by Maxwell Morrison Esq., and is also noticed by Mr Robert Bell, in his late publication on Leases, p. 192. In the notes on that page, there is a quotation which, after describing the nature of the question now alluded to, proceeds thus—'The Lords found, that whatever operation or me-'lioration a country tenant made upon the houses, if habitable, 'for his own easier dwelling or accommodation, as striking out 'new windows, or glazing them, or making a halling to break 'the force of the wind, &c. he could claim nothing on that ac-'count; the master was obliged to him, but he could not retain 'his rent on that account; neither could he demolish or take 'them away,' &c. The note then goes on—'Such were the 'grounds on which the judgment in this case proceeded; and it 'fixes, 1*st*, That repairs *for the accommodation of the tenant* can-'not be charged against the landlord: 2*dly*, *That they cannot be* '*taken away*,' &c. A decision was lately pronounced by the Sheriff of Berwickshire, in a question at the instance of Sir James Hall, against one of his tenants, named Dodds, which, the respondent is informed, fully recognized the principle he now contends for. Another decision, completely in point, was pronounced by the Sheriff of Linlithgow, so recent as 27th November last, in a process at the instance of an incoming against the outgoing tenant of a farm, (Mr Wright, now farmer at Papple Westmains in this county), who, in removing a thrashing machine erected by him, attempted also to carry off the joisting, flooring, &c. of the barn adjoining; and as the *merits* of that case are so *directly the same* with the present, in every particular, the respondent will take the liberty of engrossing the interlocutor at length, which is in these words. '*Linlithgow, 27th November*, 1807.—The Sheriff hav-'ing considered this petition, answers, replies and duplies; Finds, 'that the defender is not entitled to take down or carry away the

'shed or roof which covered the machinery of the thrashing engine, nor to take down or carry away *the joists or lofting of the barn adjoining the said engine;* which lofting the Sheriff understands not to consist of loose boards, but to be a proper and complete lofting, and firmly united to the joists and timbers of the building, and thereby rendered part of the same: Ordains the defender, within one month from this date, and at his own expense, to return and put up again, in a sufficient manner, such parts of the said joisting and lofting as he has already carried off and taken down; and, in case of his failure therein within the time aforesaid, authorises and empowers the complainer to replace the same with new joists and boards at the defender's expense, he keeping an account of the charge of that operation: Finds expenses due.' In short, there does not exist a doubt, that, although an outgoing tenant is entitled to remove the *whole machinery* of a thrashing machine which he may have erected on the farm he ceases possessing, yet it is equally indisputable and clear, that he cannot remove the joisting, flooring, partitions, &c. of the barn which adjoined said machine, nor even the horse-course thereof. This distinction was noticed by your Lordship in a process, Gray against Deans, lately decided in this Court, wherein you 'found the respondent had a right 'to remove and carry off the *machinery* of the thrashing mill in 'question, but that *he had no right to pull down or remove the 'horse-course thereof.* In respect whereof,' &c.

To the above answers, replies were immediately lodged; and many of the arguments used are well entitled to dispassionate consideration from the landed interest in every quarter.

'The question before the Court is of a simple nature, not involved with points of law, and little influenced by precedents or decisions. The introduction of machinery into the business of agriculture, is of modern origin; therefore, few judicial proceedings have occurred, betwixt outgoing and incoming tenants, concerning it. In fact, since machinery for thrashing corn was invented, a question similar to the present one has scarcely been agitated. It is believed, that no more than four decisions have as yet been given in the inferior courts of Scotland, and that three of them were favourable to the principles now to be maintained in behalf of the petitioner.

'As the respondent admits, in the fullest manner, the right of the petitioner to remove the whole thrashing machine, and its *relative* articles of machinery, the question, at first sight, would seem to be completely settled; for, assuredly, the petitioner does not seek to remove a single article but what is requisite in the working of the machine. But, after making this broad and very correct admission, the respondent insists upon a judicial combat

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(these are his own words), to determine whether the joists, flooring, partitions, beams, &c. come within the above description. It shall therefore be the business of the petitioner to show, that the whole of the articles contended for, in the present action, are component parts of the thrashing machine; or, which is the same thing, that they must necessarily be used when the machine is employed in separating corn from the straw, and cleaning and preparing it for market. If the petitioner can show, that the arduous tasks of thrashing and dighting corn cannot be performed, by the machines now in use, without the aid of the articles afterwards to be enumerated, he confidently trusts that success will accompany him in the present action.

'The articles claimed by the petitioner, and detained by the respondent, are, 1*st*, Two large beams which reach across the horse-course or shed, and into which beams the upper gudgeon of the main wheel runs. 2*d*, The bolster or bottom piece, in which the lower gudgeon of the main wheel works. 3*d*, The frame placed in the fore-wall of the thrashing barn, into which the face wheel is fixed that drives the lying shaft, immediately connected with the drum or cylinder. 4*th*, The loft on which the drum or cylinder is erected, and the beams or joists on which the deals or flooring of that loft is laid. And, 5*th*, The partitions which separate the inner-barn and chaff-house from the rest of the buildings. Every one of these articles were erected at the sole expense of the petitioner; and he made them under the understanding, that they were to be at his disposal at the conclusion of the lease.

'From the description already given, your Lordship will comprehend, that the other parts of the machine would be useless, were they not aided and assisted by the articles enumerated. For instance, how could the main wheel be brought into action, were its gudgeon not to run into eyes fixed in the bolster and beams? and how could the drum or cylinder reverberate, and beat out the corn, were it not erected upon a loft supported by beams or joists of more than ordinary strength? One of the beneficial purposes of the machine is, that the grain is cleaned as fast as it is thrashed. But how could this purpose be accomplished, were partitions in the barn wanting, whereby the clean grain is kept separate from the offal and chaff? In short, the respondent, in his answers, does not use one argument for detaining the above articles, which might not, with equal strength, have been applied to the detention of those he has suffered to be removed. The articles removed are useless without the aid of those detained; and it is only making a distinction, when in reality there is no difference, to assert, that some branches or parts of the machine, must be regarded as fixtures, erected for the benefit of the

property, while the fanners, firmly fixed to the ground floor, and the bed on which the cylinder revolved, and which was fixed to the loft by the strongest nails that could be made, are acknowledged to be the property of the petitioner.

'The petitioner is aware, that the joists being built into the wall, it may be urged, that they thereby become fixtures; therefore, not removable by a tenant at the conclusion of his lease. The petitioner, with submission, considers an objection of this nature to be more specious than solid; and humbly presumes, that slender consideration is required, to discriminate betwixt the ancient rules which regulated fixtures, and those now in common use respecting agricultural machinery. Formerly, the barns of a farmer consisted entirely of walls and roofs; therefore, it was impracticable to take down or remove any part of the fabric, without doing injury to the remainder. At this time, the farmer's corn barn may be compared to a large manufacturing house containing valuable machinery, erected at a great expense, and every part so put up, as to be easily taken down, without endangering the walls or roof of the tenement. Under these impressions the petitioner acted. When he prepared to remove the joists and beams, masons were provided to fill up the gaps, and to put every part of the walls in good and complete condition. Had he injured the walls, of course he was liable; and your Lordship will not credit, that it ever entered into his mind to do any thing inconsistent with the duty obligatory upon him to his late honourable and respectable landlord.

'From what has been stated, it is humbly hoped, your Lordship will have no difficulty in ascertaining, whether the articles belonging to the thrashing machine of the petitioner, and detained by the respondent, are or are not rightly characterized in the *Answers*, as 'articles of repair which had been bestowed 'on part of the premises now occupied by the respondent.' Nor will your Lordship have greater difficulty in determining, whether the loft, partitions, beams, &c., are, or are not, *appendages* of the thrashing machine, erected at the sole expense of the petitioner. The respondent seems to think, that a thrashing machine may be worked without these appendages; but he might as well have maintained, that the mail-coach could travel to London without wheels and axletrees. In short, the respondent absolutely trifles with your Lordship in this branch of his Answers.

'The only argument of the least weight used by the respondent is, that the joists being built into the wall, cannot be removed without damage to the premises. But your Lordship will be so good as attend, that this argument applies only to the *joists*, and not to any of the other articles detained; and you will also

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be pleased to consider, that these joists, being placed only nine inches within the walls, may be removed in an hour or two, by any skilful mason, without doing the slightest damage to the building. Should your Lordship think otherwise, the petitioner has no objection against cutting the joists close by the wall. which will effectually prevent the danger so much dreaded by the respondent. Indeed, the orders given to the mill-wright employed to take down the machine, were precisely the same with what is now expressed.

'What were the respondent's intentions, when he furnished your Lordship with an extract from the proceedings of the superior Court in 1707—a period when an idea of thrashing machines had not entered into the mind of man—the petitioner is at a loss to determine. Had the petitioner attempted to carry off the horse-course, the respondent with some degree of grace might have brought the business of Sir John Houstoun into his Answers; but as such a removal was never thought of, far less attempted, any thing bearing upon it, directly or indirectly, must be regarded as a frivolous way of blinking the main question, by the introduction of extraneous discussion.

'If the petitioner is rightly informed, the decision of the Sheriff of Berwickshire was directly contrary to what is averred by the respondent. And with regard to the judgment pronounced by the Sheriff of Linlithgowshire, it would seem, from the words of the interlocutor, that that learned Gentleman had but an imperfect conception of the nature and powers of a thrashing machine, otherwise he would not for a moment have imagined, that the loft on which such a machine was erected, could possibly be formed of '*loose boards.*' But without recurring to the decisions of any other Judge, the petitioner reposes his confidence in the decision recently pronounced by your Lordship, in the case of Gray and Deans, according to which, the outgoing tenant was permitted to remove similar articles with those now the subject of litigation. A decision of the like nature was also given by the Sheriff of Fife about 18 months ago; and the petitioner may mention a circumstance well worth your Lordship's notice at this time, viz. that another tenant of the estate, of which the farm of —— ——— forms a part, was peaceably permitted, two years ago, to remove, not only what is technically called machinery, but also the several appendages belonging to his thrashing mill, without which the machinery was altogether useless.

'When determining this question, your Lordship will consider, that the interest of agriculture is materially concerned in the issue.—The erection of thrashing machines has been of incalculable advantage to the proprietors of land; because, it enabled

tenants to pay much more rent, than was practicable before machines were introduced.—In many counties of Scotland, these machines are only partially erected; therefore, any discouragement given to new erections, must of course serve to lessen the value of landed property. When tenants are assured that machinery, and its appendages, are as much their property as horses employed to work the machine, a doubt need not be entertained, but that machines will in a few years be disseminated over the whole country; but, should it be understood, that the appendages are to be considered as fixtures, or as an amelioration of the property possessed for a limited time, then machines will either be neglected, or, which is nearly the same thing, will be erected in a superficial manner, at least in a way to which the term *fixture* will be altogether inapplicable. Had the petitioner thought of this action, he could with ease have erected the machine in such a way, as would have prevented your Lordship from receiving the trouble given on the present occasion.

'Before finishing these replies, the petitioner thinks it but right to inform your Lordship, that this action is not brought with any view to prejudice, or injure, his successor in the farm of —— ——. The machine, and its appendages were repeatedly offered to the respondent, at a valuation to be made by neutral persons mutually appointed; which offers, for reasons best known to himself, the respondent declined to listen to, till the petitioner had entered into terms with another person. The respondent then professed his willingness to treat for the machine; but received for reply, that it was then too late, as another purchaser was in the field. Whether this issue originated the present action, the petitioner will not take it upon him to say; but he thinks it right to hint these matters to your Lordship, so as his motives in bringing this action, may not be misinterpreted. *In respect whereof,*' &c.

The following interlocutor was given out by the Sheriff-depute.

'The Sheriff-substitute having considered the petition, answers, and replies, and advised with the Sheriff-depute, finds, in terms of the prayer of the petition, with the exception of the *joists* built *into the wall*, which the Sheriff finds to be *fixtures* that cannot be removed by the outgoing tenant, and prohibits and discharges him from so doing; but finds him entitled to remove the other articles put up by him as appendages to his thrashing machine, and prohibits and discharges the respondent from interfering with him in so doing; Finds no damages or expenses due, and decerns; and appoints this interlocutor to be immediately intimated to parties' procurators.'

Against

Against this interlocutor a reclaiming petition was offered, and refused by the Sheriff-depute without answers. The incoming tenant then applied by bill of advocation to the superior court; which bill was passed by Lord Woodhouselee, on the ground that the question was a new one, therefore meriting discussion. Accordingly, the bill was discussed before Lord Newton, who, after a full hearing, was pleased to confirm the Sheriff's interlocutor, and to decern against the incoming tenant for the whole expenses incurred by the bill of advocation.

Had the outgoing tenant been disposed to present a cross bill of advocation, it is probable he would have prevailed to the full extent sought after in his petition, by obtaining liberty to remove the joists, which the Sheriff had been pleased to consider as fixtures; but, satisfied that a principle was established, of important consequence to the interest of the tenantry of Scotland, and convinced that that interest would not suffer from the limitation adopted by the Sheriff, he was averse from pushing the matter to its uttermost extremity. A practice, some time ago introduced, has already become pretty common, whereby the joists of a mill barn are placed upon posts and beams, in which way they cannot, by any interpretation, be considered as fixtures. It is therefore recommended to all tenants who may erect thrashing machines, to construct the loft in the above manner; and, by so doing, they will be fully entitled to remove the whole appendages of thrashing machines, the horse-shed excepted, which may, with some propriety, be regarded as a fixture, therefore not removeable by the outgoing tenant.

The above process is detailed, not with the slightest intention of giving offence to any person, but merely with a view of informing the tenantry of Scotland with respect to rights, which have been often denied, and sometimes contested. Perhaps the plan most conducive to the interest of all parties, would be for the proprietor, at the conclusion of the existing leases, to purchase both machinery and appendages, transferring them over to the new tenant as fixtures, and taking him bound to leave the whole in workable condition at his departure. The trouble and expense of taking down and re-erecting a thrashing machine is considerable; besides, it often happens, when the parts are once separated, that they cannot again be sufficiently put together. These risks and inconveniences would be completely avoided, by adopting the plan now recommended; and, whilst disputes betwixt outgoing and incoming tenants would be narrowed, the interests of proprietor, occupier, and the public, would be greatly promoted. N.

BRANCH II.

Review of Agricultural Publications.

General View of the Agriculture of the County of Inverness; with Observations on the Means of its Improvement. By James Robertson, D. D. Drawn up for the Board of Agriculture and Internal Improvement. pp. 447. London, Phillips. 1808.

Dr Robertson, ſome years ago, appeared in our court, (*vide* vol. I. p. 191.), and, after being minutely and impartially examined by our reviewers, was found duly qualified to act as an agricultural reporter. In his View of Perthſhire Huſbandry, much appeared deſerving of praiſe, and little meriting cenſure; and ſomething to the ſame purpoſe may be ſaid of the work now before us. At this time we ſee little cauſe to change the opinion formerly formed of Dr Robertſon's abilities; though we cannot avoid remarking, that he labours under ſome prejudices, and indulges too frequently in animated declamation. Still, as an intimate knowledge of human character, and an eager deſire to promote agricultural improvement, are conſtantly diſplayed, we are inclined to conſider this performance as not inferior to his former one. We differed with him on ſome points formerly; and we muſt differ with ſeveral of his opinions on the preſent occaſion, particularly, when he treats of what may be called the new ſyſtem of Highland huſbandry. Here, he ſeems guided by principles ſimilar to thoſe which influence our worthy and benevolent friend, Mr Dempſter: but, though theſe principles are, in our opinion, incorrect; yet, being founded in a deſire to promote human happineſs, they are, though miſtaken, entitled to reſpectful conſideration, when examined and diſcuſſed.

The county of Inverneſs, generally ſpeaking, is a mountainous diſtrict, of great extent; bounded on the ſouth by Argyle and Perth, on the weſt by the Atlantic Ocean, on the north by Roſs and the Moray Frith, and on the eaſt by Nairn, Elgin, and Banff. The ſurface of the diſtrict is moſtly covered with heath, though in the valleys or ſtraths much ſoil of good quality is to be found. In the Aird, or that tract which lies on the Beauly Frith, there is ſome rich clay land; and to the eaſtward of Inverneſs, a conſiderable breadth of arable land appears. The extent of the diſtrict is ſuppoſed to be between four and five thouſand ſquare miles, and the number of inhabitants ſeventy-four thouſand.

From this abſtract account, our ſouthern readers will at once diſcern, that the county of Inverneſs is not calculated for carrying

on arable husbandry, on any thing like a great scale; and that by far the largest part of it must be constantly devoted to the breeding of cattle and sheep. Formerly the cattle system was, almost in every case, followed by the inhabitants; but, latterly, it has been completely ascertained, that the soil may be more profitably employed in rearing sheep; in which way, a much higher rent can be paid to the landlord, and a far greater quantity of food provided for the public, than practicable under the ancient system. As sheep farms must of course be of greater extent than cattle ones, and as few of the former husbandmen were qualified for carrying on sheep husbandry in a proper manner, a change of system necessarily occasioned a change of tenantry, consequently, was the means of throwing many of the old possessors out of employment. The change, however, has as yet been only partially carried into execution, and ought not to be forced faster forward than local circumstances will warrant. To let things take their natural course, is the best policy on all occasions. That they will ultimately take the right course, if not obstructed by artificial regulations, may be regarded as a truism; therefore, every attempt to limit the right of individuals in the management of their property, can only be considered as unwise and impolitic,—as tending to retard the improvement of the country, and to keep the inhabitants in a state of misery and ignorance.

Having made these preliminary remarks, we shall notice some parts of the work, though extremely sorry that it is out of our power to give an examination equal to what it merits.

After stating, that the remains of the feudal system were legally abolished in 1748; and that the inhabitants of the Highlands, since the administration of Lord Chatham, have been trusted in every war with arms, Dr Robertson exclaims,

'How are these people to be treated? Is Government bound to do any thing for them, or is it not? Are Kings to be nursing fathers, and Queens to be nursing mothers, according to the dictates of the highest authority regarded by mankind? Is it not enough, that upwards of an hundred thousand of these people have already been under the necessity of leaving their country, never to return? Must the remainder be compelled to follow that example? Is there no remedy to prevent this voluntary exile of its inhabitants? Are the Highlands to be depopulated? Is this limb of the empire to be abandoned as useless, when threatened with a mortal disease? Does the State owe no paternal regard to these men? Is it not a debt of gratitude due by their country, to cherish them? Is it not the soundest policy to nurse and to rear that race of people? Have they not conferred on the empire the most important obligations; and is there no return to be made, no duty to be performed, in requiting these obligations? Are all our wars at an end? Is there to be no future struggle to ward off danger, or to maintain our rank

rank in the ſcale of nations? Is there no ſuch virtue in the ethics of this country, as public or national gratitude? Is gratitude confined to individuals alone, to inferiors only, or to perſons of the ſame rank in life? Does this amiable virtue, which has always been thought to require no law to recommend it but its own native excellence, riſe no higher among men? Is no return, no thankfulneſs, no recompenſe, due from the great to the little, from the high to the low, for the moſt ſubſtantial favours? Is there no regard to be paid to their intereſt, no good offices due from the governing to the governed, for all that theſe people have done, and are ſtill willing to undergo, in ſupport of the glory and proſperity of Britain? Yes, ſurely. The national gratitude is always awake. Our Admirals and our Generals frequently receive the public thanks of their grateful country, are enriched by the bounty of the Senate, and ennobled by the gratitude of their Sovereign: and are not the men of meaner condition and of lower rank, who enabled theſe leaders to conquer, deſerving of ſome reſpectful mark of attention, of the ſame nature, though not in the ſame degree, which may be ſuitable to their conditions and circumſtances in life? That they are, none, it is preſumed, will deny. The national principle of retribution in good offices, is the ſame in both caſes; and the merit of having earned them, is ſimilar, though of a different amount; and although the ſeparate merit of every individual in the ranks cannot amount to that of their commander, yet the valorous deeds of a whole army are worthy of notice; and the meritorious earnings of a whole million of people, the ſuppoſed population of the Highlands of Scotland, *while entire*, deſerve to be rewarded by ſome mark of national beneficence. The achievements of ſuch a body of brave, loyal men, which are already upon record in the annals of their country, and the future deeds of valour, of which they are capable, in its defence, if they remain in Britain, are objects of the laſt importance. There can be no apology for treating that people with neglect; no excuſe for the Government of this country for ſuffering them to be loſt to Britain. We muſt be regarded by the world, not only as devoid of compaſſion, and ſtrangers to humanity, but as guilty of national ingratitude, indifferent to our own proſperity, and politically blind, unleſs the wings of protection be ſpread over them, and every nerve ſtrained to render emigration unneceſſary, and prevent their removal to another country. But this can only be done by conciliating their affections, and by providing in good earneſt the means of their comfort and happineſs at home.

'What is to be done to prevent the Highlands from becoming a deſert? What remedy ought to be applied to ward off in time this national calamity, which may ſoon become irremediable? How are theſe mountaineers to be retained in their own country, and that race of people preſerved from becoming extinct in Britain?' Introd. p. viii.—xi.

Such a multitude of queſtions are put in the above paſſages, that a week's time would hardly ſuffice to anſwer the whole of them. To the ſecond queſtion, however, it may be anſwered, that Government has done more for the Highlands than for any other part of the British

British empire. Has not four or five thousand pounds *per annum* been voted every session, since General Wade commanded in Scotland, for making and repairing Highland roads? And is not Government at this day making one of the most extensive and noble canals ever attempted in the British empire, the expense of which is to be defrayed entirely out of the public purse? Is not the same Government at one half of the expense of the many roads and bridges now constructing through Highland districts in every direction? In short, Government has done every practicable and feasible thing which could serve to further improvement in these remote and uncultivated districts.

Again, if a hundred thousand Highlanders have already been under the necessity of leaving their country, and seek employment, either in the southern counties of Scotland or in America, it does not follow, that government are to be blamed on that account; because it is an undoubted truth, that there are at the present moment full as many people in the Highlands as are wanted, notwithstanding of the numerous public works carrying on in every quarter? Does Dr Robertson mean to convert the Highlands into a breeding warren, out of which the army and navy may be constantly recruited? Or, does he mean to recommend, that the people of that part of the island should be supported, either at the public expense, or at the expense of those who possess landed property in the districts which compose what is called the Highlands of Scotland? If he does not mean one or other of these things, he means nothing at all; and the accumulation of sonorous words in the passage under consideration, can only be regarded as idle declamation, calculated to create strife and division amongst the people, by making them believe that Government is inattentive to their welfare and happiness.

Dr Robertson entertains a high opinion of the Board of Agriculture. He says, p. xvii. of his Preliminary Observations, 'what the Board of Agriculture has already done, is a presage of what they are desirous to do, for the good of their country. Their industry has been unremitted; their activity has surmounted many difficulties; their wisdom, in devising the best plans of improvement, and their perseverance in pursuing them, demonstrate the utility of such an institution.' Now, it is well known, that, from the outset, we have been steady supporters of the Board of Agriculture; but our partiality for that meritorious institution, will not allow us to accompany Dr R. the whole length of his statement. The Board did a great deal of good, when surveys of the agriculture of the island were ordered; but, with regard to the value of many other measures, we are much at a loss how to make an estimate. A paucity of funds prevents the bestowing of premiums

miums for new inventions and discoveries; and it is not to be expected, that a Board, composed of rich landed proprietors, can be well able to teach much improvement in practice. The Board has certainly done what could be done by such an establishment; but to praise it for devising the best plans of improvement, &c. &c., may perhaps be considered as caricaturing its proceedings, rather than conveying approbation of the well meant endeavours of its members.

Speaking of the Fisheries, concerning which Dr R. is very sanguine, a great mistake is committed, respecting the population of Highland districts. Dr R. estimates the population of those districts at one million, though it is certain, that the whole does not reach one half of the number reported. He says,

'If the population of these provinces, which are termed the Highlands, be one million; if one half of these be males; if, again, *one half of these be men acquainted with the sea*—here you have two hundred and fifty thousand males of all ages, who have either been in their youth, or now are, or, when grown up, shall be, intrepid sailors. Let one half of these be deducted, as too young, or superannuated, and there remains one hundred and twenty-five thousand in the Highlands, fit, at all times, as things now stand, for immediate service on board his Majesty's fleet, upon receiving proper encouragement. Nevertheless, the matter cannot remain in this situation. Either the Highlands will be depopulated, if they are neglected, or the numbers of the people may be increased; nay, I expect to demonstrate before this Report is brought to a close, that their population may be at least doubled, and better fed and better lodged, by proper attention, than they are at present. The national advantages which a maritime state is able to derive from subjects duly bred to the sea, are so great and so manifest, that it would be wasting time to enter largely upon that subject. Whoever sees not the truth of this at a glance, or would require it to be established by proof, is blind to the interest of his country, and ignorant of the history of the world. What was it that raised the Tyrians of old to such eminence and wealth? Their sailors. What was it that enabled the Carthaginians so long to rival Rome in her best days? Their sailors. What was it that brought the paltry kingdom of Portugal, during a certain period, to such a rank in the scale of nations, and enabled the Portuguese to colonize great and distant countries? Their sailors. What raised the fishing villages of the Dutch, in the midst of marshes and swamps, to be great and flourishing cities? Their trade. But what gave them that trade and wealth, and enabled them, about a century and a half ago, haughtily to assert the empire of the ocean? Their fishermen becoming sailors. What has raised our own country to a pitch of glory and power, unexampled in all former ages? Our Navy. What will secure our prosperity, our independence, our very existence? Our Navy. What will enable us to transmit our privileges

to

to our children? Our Navy. Let Europe, *if it must happen*, be turned upside down; but let my country dread no foe, while she is wise enough to be adding to her naval strength, to be cherishing her sailors, and keeping her fostering arms around every nursery of future seamen.

'Suppose that the proprietors in the Highlands should be averse to establish fishing villages, in proper stations and under proper regulations, upon their estates; (but I cannot suppose it): yet let us suppose that any of them would be unwilling to do so; is it not competent for Government to say, there is a station on your property fit for a village, with suitable accommodations for fishermen; either establish a village there yourself, or dispose of a piece of ground in that place to the State, according to the valuation of a jury, and we shall colonize it? It is not the province of the writer of an Agricultural Report to give judgment between the public and a private proprietor, in this or any other matter. Absolute power must reside somewhere in every effective government, and it must be understood to be generally competent for that government to provide for its own preservation, by the exercise of this power, with or without instances to exemplify every supposable case. But the analogy in the matter alluded to is very nearly allied, if not exactly similar, to what happens almost every session of parliament, in regulating the embellishment or enlargement of cities, in changing the line of roads, and in directing the course of canals.' Prelim. Observ. xxi.—xxiii.

Now, it strikes us, that the establishment of fishing villages in the Highlands would not be of much benefit under existing circumstances; and in support of this opinion, the situation of those villages, erected under the patronage of the Society established for promoting British Fisheries, may be quoted. But Dr Robertson would compel landed proprietors to erect such villages, whether they were or were not beneficial to their interest; at all events, he would make them dispose of ground sufficient for erecting these establishments. Highlanders have always been considered as good soldiers, but, as seamen, their merit has not hitherto been sufficiently ascertained. To speak of there being one hundred and twenty-five thousand men in the Highlands fit for service on board his Majesty's fleet, is worse than nonsense. It is a disputable point whether there are so many men above twenty years of age in the whole of the Highland districts; but, were that number to be found, it is plain that not more than one fifth of them could be used for the sea service without materially injuring every other branch of business.

In describing the field of battle at Culloden, Dr Robertson falls into a slight mistake. He says, 'Even the stone-walls on their right, which the rebels expected to have been some protection from Stapleton's dragoons, proved only a forlorn hope.' Now, it is well known that General Stapleton commanded the French

French hussars sent over to assist Prince Charles, consequently could not be in the situation mentioned; also that the British dragoons at Culloden, who, with the Argyleshire Fencibles, broke down the wall in question, were under the command of Lieutenant-General Henry Hauley. We merely notice these circumstances, so as the subject may be more distinctly elucidated in a subsequent edition.

The account of Sir James Grant's estate is detailed in Dr Robertson's best manner, and we extract it with much satisfaction.

'Sir James Grant holds the supreme military command of the county, under his Sovereign. He is beloved to adoration by his people; and not only commands the obedience of their personal services, as Lord-Lieutenant of Inverneſs-ſhire, but the grateful affection of their hearts, as the benefactor of this county, and the father of his tenants.

'From Caſtle Grant to Avemore, along the ſide of the Spey, the face of the country is very much diverſified. In ſome places, the antient mode of occupying the ground remains in full force: cottages crowded into hamlets; the farmers living in cluſters, all in one place; their land open, and in alternate ridges. But in other places the land is encloſed, and a neat ſteading ſet down for a ſubſtantial tenant; and where the people are leſs affluent, the ground is divided into ſeparate lots, of fewer or more acres, according to the ability of the occupants, where every tenant is ſet down upon his own lot; which mode of ſettling the country, with the addition of villages in proper ſituations, I hope to demonſtrate, is the moſt effectual plan of preſerving the population, of accommodating the people, and of preventing the baneful effects of emigration; while, at the ſame time, the country is improved, and rendered capable of producing more rent to the proprietors. What an extenſive field does Strathſpey, and indeed every province of the county, open to the landlords, of providing for double the number of people (were it neceſſary) that are at preſent in the county, by encouraging and directing the inhabitants to the means of cultivating the immenſe tracts of waſte land in every diſtrict of the county!' lvii. lviii.

We cannot pass over the account given of the Dutchess of Gordon's cottage on the Spey, which is given with much precision. In giving topographical descriptions, Dr Robertson excels the most of people.

'At a ſhort diſtance above this place (Rothiemurchus), and on the oppoſite ſide of the Spey, Kinrara, the cottage of the Dutcheſs of Gordon, is happily ſet down. The vale, in which the river flows, is narrowed conſiderably at Kinrara. The banks on both ſides are richly wooded by a variety of trees, whoſe green foliage far up the acclivity of the hills, gratifies the eye, and the ſweet fragrance of the birch embalms the air. Some beautiful fields are formed by the ſerpentine courſe of the river, which glides by with an equal, but not rapid motion, on its pebbled bed. This manſion ſtands on the brow of a ſmall wooded hill, in a commanding ſituation, with dropping trees on the fore-ground, fronting

fronting the ſouth, and in full view of the river and all the ſurrounding ſcenery. The piazzas along the front, the Venetian windows, the elegance of the apartments, the furniture, the library, and the ſtyle of the whole, diſplay the moſt exquiſite taſte, and ſhow that Kinrara is no ordinary cottage. If the Graces had ſuperintended the building of a lodge for their Queen, it might have been conſtructed after this model. But the captivating appearance of the cottage is only the ſhadow of the hoſpitality that reigns within.

'The garden is cloſely emboſomed in wood, ſheltered from every blaſt, and under the direct rays of the meridian ſun, with a gentle declination. The drilled turnips, and the other crops, demonſtrate the variety of talent and ſtrength of mind, which are the ſprings that move all the operations about this ſingular place.' lix. lx.

In the section wherein ſoil and ſurface is treated of, we obſerve ſome very judicious obſervations. For the benefit of our readers, what is ſtated reſpecting moſs, moor, and heath ground, ſhall be extracted.

'*Moſs, moor, and heathy ground*, in the opinion of ſome intelligent perſons, cover two-thirds of the ſhire of Inverneſs. If one fortieth only be arable land, according to the account formerly taken notice of, there are probably twenty-ſix of the remaining parts covered with heath, incumbent on moſs, or a till bottom. Heath generally produces a cruſt of moſs on the ſurface, whatever be the ſoil below. The land occupied now or formerly by natural firs, aſſumes the ſame appearance, becauſe they ſeldom grow ſo cloſely, or ſhade the ground ſo completely, as to deſtroy the heath.

'While ſuch a great proportion of the county is under the poſſeſſion of this plant, which is gloomy in its appearance and barren in its nature, it is an object of conſiderable importance, to deviſe means either of converting it to ſome uſeful purpoſe, or of circumſcribing its boundaries.

'When the heath begins to ſpring towards the beginning of ſummer, cattle are very fond of the tender ſhoots, provided the heath be young. This ought to ſuggeſt the propriety of burning it down every third or fourth year. The ſhoots of young heath come forth more early, advance to a greater length, are more vigorous in every reſpect, and conſequently more nutritious, than after it is old. The aſhes, ſmall as they are, of the withered graſs, of the fungous or of the ſolid moſs at the root, added to that of the heath itſelf, give a kind of top-dreſſing to the ground. All this melioration of the ſoil is aided by the dung of ſheep, which reſort in great numbers to the ſpot that had been thus treated, and crop greedily the tender ſhoots of the new-ſprung graſs and heath. The moſt ſtubborn and barren heath will, by this management, change its nature, and the ſoil on which it grows become gradually more productive of graſs.

'In the third or fourth year of its age, the heath may be profitably cut down for hay, when in full bloom, about Lammas. If the ſurface be tolerably ſmooth, a ſtrong ſhort ſcythe may be uſed; but,

but, in coarse ground, this operation must be performed by the sickle. The hay may be dried in the same manner as grass-hay, and laid up in huts, where it is to be used. This practice is eagerly recommended in a manuscript, which Lord Sheffield, late President of the Board, did me the honour to send from London, besides all his other good offices, to assist me in this arduous Survey. We all know that heath hay is carefully saved in the North of Europe, which, with the branches of trees, occasionally lopt off, allays the cravings of hunger to cattle in a rigorous winter.

'Even in our own climate, when ferns are cut down, in the month of July, for litter to horses, it is well known, that if the ferns had been properly preserved, the horses will begin to eat them, provided the hay at any time were spent in their racks.

'High mountains are not covered with heath to the summit; nor are the mountains in all the districts of this county equally gloomy and forbidding. The hills of Lochaber are a good mixed pasture of grass and heath interspersed. Where this mixture takes place, the heath is naturally short and fine, and comes into the same bite with the grass; which in all cases affords a hearty and nourishing food for cattle. Glenivaish is of this description, though it forms the skirts of the highest mountain in Britain; the hills of Arasaig, freckled as they are with rocks; those of Glendessary; those of Glenspian; those of Glenqueich; those on the north of Glenspian; those of Glenroy; those on both sides of Loch Lochy, particularly at Lowbridge, where the hills in general are as green as a meadow; those on the sides of Loch Oich, to its northern extremity, where the dark brown heath begins on the west; those in both Glenelgs; those in the head of Strathglas, and in the braes of Badenoch; in all which places the hills are more or less of the same hue, and yield most plentiful pasture. But, on the confines of Strathspey, very different is the aspect of the mountains. At the head of Strathdearn and of Strathnairn, in Stratheric, on both sides of Loch Ness; from behind the head of Urquhart, and across Glenmoriston to the source of the Oich, and in other districts, the mountains are gloomy, black and sterile, in many large tracts, to such a degree, that in the distance of twelve or fourteen miles, hardly any verdure is to be seen, except where a solitary rivulet, by its occasional flooding, produces some green ground in part of its course, to relieve the eye.

'In all the mosses, the roots of fir-trees stick up, which are frequently dug out by the inhabitants and dried for fuel: so plenteous are they, and so singular in their appearance, that Mr James Grant, factor to Sir James, told me, he had seen in Strathspey three tier of fir-stocks directly above one another in the moss; where, no doubt, that wood had thrice come to maturity, after every former growth had, by its destruction, formed a soil capable of nourishing the succeeding forest. Upon any other supposition, these stocks must have been beside one another, but they never could have been perpendicularly above each other. What a length of time must have elapsed,

ed, before the spoils of one forest, mouldering down into a state of decomposition, could have produced a soil of such solidity and depth, thrice repeated in the same spot, as could carry a wood of the same species and magnitude!' p. 26—29.

Concerning breaking up and reclaiming moors, Dr Robertson gives the following sensible directions.

'Persons of considerable experience in the cultivation of moors, recommend the following process. Begin by removing the stones which appear above ground, in the manner already described; then yoke a strong plough upon the moor, when the labours of spring are finished. Let the ridges be broad, and the stones or other obstructions cleared away, as they occur. Continue cross ploughing and harrowing, at proper intervals, that the land may be thoroughly broken by the beginning of next summer. If a decent crop of drilled turnips can then be raised on the field, the undertaker may congratulate himself on the success of his experiment. The turnips ought, if possible, to be eaten upon the ground. But if the first crop of turnips should fail, a second crop of them ought to be tried the ensuing season. Turnips are recommended in preference to potatoes; because they thrive on a poorer soil; because they afford a more complete cover to the ground; because the loss, by their failure, is not so much felt as an article of provision; and because their being consumed on the ground will help to enrich it for a future crop of grain and grass-seeds. Not only the turnips, but the first crop of grass, ought to be depastured by sheep; taking care that not so many sheep be put upon it as will eat the grass bare; for in this case, the heart or germ of the plants may be in hazard to be bitten off, or the very roots pulled up.' p. 34.

The general state of the tenantry of Inverness-shire, may be pretty correctly ascertained from the section which treats of Farm-houses, Offices, and Repairs.

'The condition of the houses in which farmers and their cattle are lodged, uniformly indicate the state of a country, in respect of improvement. Many are the symptoms, of which this is one, how far a proprietor and his tenants understand or neglect their own interest. Where a stranger observes mean, dirty, inconvenient houses upon any estate, he concludes, without further inquiry, that the possessors of these houses are poor, spiritless and indolent, and, what is worst of all, perhaps oppressed. He concludes also, that the landlord, whatever be his splendour in the sumptuousness of his table, or the gaudiness of his equipage, has more vanity than judgment; a greater desire of dazzling the eyes of mankind, than of promoting the comfort of his tenants, or increasing the value of his own property. Where, on the other hand, the dwellings of the ordinary farmers are snug, comfortable and clean, this is a proof that the people both desire and deserve to be properly lodged; and that the landlord has such a degree of humanity, that he wishes to see his people happy, as well as himself. There is hardly an instance,

in which this conclusion is not drawn, and there is hardly an instance, in which it is not just. The houses of the tenantry, in any country, afford to travellers one subject of conversation on their journey, and constitute a leading article of their news to their friends, after their arrival at home. Who would incline, in these circumstances, to be held up as an object of derision or reproach, at the distance of some hundred miles? Who would incline to be stigmatized at any distance, great or small?

'The farm-houses built for gentlemen, or the wealthier sort of tenants, in this county, are well constructed and substantially built. Those of the poorer tenants are in most places mean beyond description. The huts of the Indians bordering on the Lakes of the St Laurence cannot be worse, in point of structure and accommodation. Were it my intention to irritate, I could easily give some account of these nasty hovels, or at least point out the estates on which they are most numerous and in worst condition; but my desire is to reclaim, without provoking, and to sooth into reformation by the mild language of persuasion. Even the manuscript sent to me by the Board, which seems to have been written by a native of that county, does not spare them; but I spare them, not from any approbation of the trespass, but from a fond hope of a change, and that too a speedy change of conduct. A man who retains any regard for his character, will reform sooner, while there remains some doubt of his being identified, than after he has been treated as a real culprit, and exposed by name and surname to the contempt of mankind.

'These mean houses are by far too numerous, on all the farms where they prevail. The inhabitants are too poor, for the most part, to build them properly, and therefore must increase the number, to provide accommodation corresponding to the circumstances of a stormy climate: and it would seem that the landlord cares nothing about the matter; his only object being to gratify the cravings of luxury, and to secure his rent.

'It is not meant to be insinuated, in the most distant manner, that all the dwelling-houses in this or any other country ought to be large or elegant, having courts of offices attached to them. This proposal would be equally absurd, as if it were recommended to render all the inhabitants equally rich, and equally industrious. But may not the cottages of the poor be made comfortable and commodious; more conducive to health and cleanliness, and more analogous to the progress of society in this country? While the higher ranks of the tenantry are better lodged than formerly, the lower ranks might be expected to advance a little in point of accommodation.' p. 55—58.

In describing the mode of occupation, Dr Robertson shows complete knowledge of the rural policy of the district under consideration. He ascertains the evils of the existing system with precision; though we afterwards find, that something like a continuance

tinuance of that system is recommended in the most animated and forcible terms. He says,

'The manner in which the soil is occupied, is a proof of the state in which the agriculture of any country is placed. There are certain regulations requisite in the management of land, in order to reap the benefit it is destined to produce; but if these regulations are not adopted, the soil is not brought to its full value. The object of agriculture is to increase its produce; and the purpose of all institutions and directions respecting the treatment of ground, is, to facilitate the means of accomplishing that end.

'When we see a number of farmers linked together about the same ploughgate of land; when we see all their houses huddled together in the same group, all their ground in alternate ridges, and their possessions without enclosures; these are strong symptoms of the low state of agriculture in that country. This at one period must have been the condition of all the counties of Scotland. The people chose to live in these hamlets for mutual protection: and while the proprietor was eager to increase the number of his retainers in feudal times, farms were divided and subdivided into very small holdings. The southern counties have emerged some time ago from this pitiful condition of indolence and poverty. In the northern counties, and in the shire of Inverness among others, much remains to be done, before this feudal aspect of the country is changed. In many parts of Inverness-shire, the change from alternate ridges (provincially *runrig*) has been slowly and very lately introduced; in some places it has not yet been adopted; and in one district, the practice, time immemorial, has been, for every farmer to hold his share of infield during a very limited period, generally three years, which then passed into the possession of another; but their land in this district is now divided into lots.

'The denominations of outfield and infield still prevail over one half of the arable ground of the county. The outfields are manured by the dung of cattle confined in folds, over night, during the summer and autumn, and then cropped while the land can produce any grain. The infields get all the house dung, and are cropped alternately with barley and oats, or frequently with two crops of oats after the barley.

'According to this antient system, all the contiguous tenants of the same landlord, used their hill-grass in common through the whole year.

'The dawn of improvement has, however, in some districts, begun to appear; and, by the exertions of a few gentlemen, who shine like constellations, the light of knowledge in rural affairs will soon be diffused all around them. Under a government, by which complete protection is equally held out to the poor and rich, by which the honest fruits of his industry are ensured to every man; and by the establishment of a Board of Agriculture to teach the most profitable mode of occupying the soil, the road to improvement and

wealth must be sought out by many who never trod in that road before; must be sought by all; and, if sought in earnest, it will be found.' p. 73, 74.

From what is stated in the preceding passages, Dr Robertson is of opinion, 'when we see a number of farmers linked together about the same ploughgate of land; when we see all their houses huddled together in the same group, all their ground in alternate ridges, and their possessions without enclosures;'—that these circumstances 'are strong symptoms of the low state of agriculture in that country.' Our sentiments on these matters are precisely the same with those offered by Dr Robertson; thinking that his notions are judicious and accurate. But what shall we say, after examining another branch of the work, where he supports the antient system of Highland husbandry; and reprobates with keen severity the changes lately introduced? In what follows, passion seems to have got the better of reason, otherwise a gentleman of so much good sense would not have expressed himself in such intolerant terms.

'In the county of Inverness, where the proportion of arable ground is so small, in comparison of that which can only be in natural meadow and pasture, it must be accounted a trespass against the State, and against the human kind, to alienate from the purposes of agriculture any small patches of land, where the plough can act, and throw them into sheep pastures. Does not the unmeasurable surface of hills and mountains afford plenty of room and plenty of food for sheep? Why then, alas! turn out ten or a dozen families to make room for a flock of sheep; and set them adrift into the wide world, without knowing where to go; without house or home? What a dreadful calamity to these poor people! How unfeeling and savage the heart, which is the cause of their wretchedness? A wretchedness never before heard of, since Scotland was inhabited! Who, that has the common feelings of a man, but must feel indignant at such barbarity!

'Ye theoretical writers on rural economy, who amuse the world with your fine-spun cobweb dissertations, to deceive the proprietors of land and others, with plausible sophisms, equally equivocal and equally ruinous with the responses of the Grecian oracles;—who endeavour to shut their eyes on the miseries of depopulation, to shut their ears against the tale of woe, and to harden their hearts against the feelings of humanity;—come forward with your cant phrase—every thing will find its level—a phrase which, like the panacea of the ancients, you esteem as a plaster for all sores of this kind. You tell us, that when the price of grain falls low, land will be thrown into pasture; and when the price of meat falls, and that of grain becomes high, the pasture lands will be ploughed up: you then, without attending to intermediate circumstances, jump to your conclusion

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at once, asserting, that by throwing the arable ground into grass, the population of the country is not diminished. This discovery, which is thought by you as meritorious as the knowledge of the philosopher's stone, may be true in one sense, and false in another—locally or partially true, but generally false. Keep all the inhabitants, or an equal number, in any tract of this country, and I may perhaps be inclined to think well of your maxim; but when the bestial of a district are made to travel hundreds of miles, as they always are in this case, to fetch the highest possible price, what becomes then of your golden rule of a *level* in the district where these cattle were reared? Suppose that one-third of the inhabitants of the county of Inverness were banished or starved—not a bullock nor a sheep reared in the county would remain unsold, notwithstanding all this loss of people to their King and Country, or perhaps would fetch less profit to the graziers, when these bullocks and sheep were brought to the autumnal markets in the southern parts of the island. But perhaps you, Theorists, care not for population or depopulation; that point probably gives you little or no uneasiness. Do you believe that money is every thing, and that men are nothing? If you do so, no man will envy you of your sentiments.' 185, 187.

One or two observations occur; and with these we shall conclude our examination of this article.

In the *first* place, there is not much land in the county of Inverness well adapted for corn husbandry, except the district called the Aird, and the flat country about, and eastward of, the town of Inverness, where corn has been extensively cultivated for a long period, and will continue to be cultivated, even though the whole of the Highland part of the county were thrown into grazing pastures, and allotted for rearing sheep and cattle. To the low country part of the district, Dr Robertson's strictures, whether true or false, are neither directly nor indirectly applicable, therefore unnecessary to be noticed further at this time.

In the *second* place, it is true, that the extension of sheep husbandry undoubtedly causes a removal of many families who hold possessions on the banks of rivers, or in the glens of the Highlands; but are not these possessors the very people whom Dr Robertson formerly found fault with, and whose appearance he considered as 'strong symptoms of the low state of agriculture?' Besides, has not the tenant of a sheep farm need of the low grounds, so as hay may be provided for his bestial in the winter season, and potatoes and corn for the servants whom he employs. The removal of many of the old possessors, therefore, is not to be avoided, under the circumstances of the case; because, unless the land were given to them almost for nothing, as formerly, they could not exist upon these small possessions.

In the *third* place, as many public works are going forward in

every quarter of the Highlands, the people removed may, almost in every instance, find employment at home, provided they choose to work in a regular manner; which never was the case, nor could be the case, whilst they occupied small portions of land. But should sufficient employment not be found in their native districts, the southern ones hold out a market for labour, rarely overstocked, and where they may live much more comfortably than in their former hovels, which are justly characterised by Dr Robertson as worse, in point of structure and accommodation, than the huts of the Indians bordering on the lakes of the St Lawrence.

In the *fourth* place, unless the Highlands are to be considered as a breeding warren, and annual rents be paid by government for remunerating the losses of proprietors whilst their land is kept in an unproductive state, there seems something absurd in blaming proprietors for making the most of their property,—a liberty enjoyed by all other proprietors of land, and even by every class in the community. The welfare of the state depends upon the improvement of the country; and, as the full improvement of the Highlands cannot be obtained without a radical change of husbandry, it would be highly impolitic to throw any obstruction in the way of such a change. At the same time, we are clear, that the change ought to be gradual and progressive; consequently, would not be violent, or occasion more than a temporary inconvenience to the persons obliged to remove from their former habitations.

We meant to have made some other animadversions upon this Survey; but the length to which the article has already gone, prevents further extension. It may only be added, that Dr Robertson is an excellent writer, and very able (we don't say willing) to make the worse appear the better cause. He has faults, or, more properly speaking, prejudices; but if these are cautiously viewed, his Report of the Husbandry of Inverness may be read with much satisfaction by the amateurs of agriculture, being in general distinctly arranged, and perspicuously expressed.

N.

On the Advantages which have resulted from the Establishment of the Board of Agriculture; being the Substance of a Lecture read to that Institution, May 26th, 1809. By the Secretary to the Board. London, Philips.

SERVANTS are too often disposed to read lectures to their masters, though it must be confessed that these are seldom given in terms so pleasant and agreeable as used by Mr Secretary Young when lecturing his masters who sit at the Agricultural Board. This

This small, but complimentary treatise, may therefore be regarded as a perfect pattern to all servants disposed to bestow advice upon their masters. By imitating this pattern, servants will be in no danger of giving the slightest offence to those who are lectured, because the leading principle of the whole is admirably calculated to make the hearer think well of himself, consequently secures respectful attention to the advices in this way communicated. Of the truth of these things, take the following passage as a notable instance.

'On this principle, it might have been said by the Minister to some of the leading members of the new institution, you, Sir John Sinclair, have been active in whatever could promote the prosperity of Scotland; you, Mr Coke, are happy in efforts for the improvement of Norfolk; you, Lord Egremont act with energy for Sussex; you, Duke of Bedford, manifest decided talents, to bid a happier cultivation adorn the district that surrounds you; you, Lord Winchelsea, are alive to whatever is beneficial to Rutland; you, Lord Moira, patronize the exertions of the farmer in Leicestershire; Somersetshire looks to you, Mr Somerville (Lord Somerville), for your skill in live stock; you, my Lord Bishop of Llandaff, whether in the paths of science, or the fields of cultivation, never applied to any pursuit that did not flourish under your masterly hand; you, Mr Willoughby, have been for twenty years the chairman of your quarter sessions, with a perfect knowledge of all the rural concerns from which originate the public business of a county; you, Mr Barclay, educated yourself in practical agriculture, and transferred the spirit of Norfolk husbandry to the regions of the north; you, Mr Fordyce, made similar exertions on the wastes of Berwickshire; you, Mr Pulteney, have turned the keen calculations of private interest to the resources of the State; and you, Sir Joseph Banks, who have, so beneficially to science, presided at the head of another institution, you, Sir, have contributed, by enlightened efforts, to render philosophy subservient to the promotion of domestic industry; assemble for nobler purposes than local or partial exertions, and hail the coming of more brilliant days to the agriculture of Britain:—Such men as you are, cannot meet and deliberate without effect; the result must be beneficial to the agriculture of the kingdom. In this manner might that great, but departed Minister, have addressed those, who were first appointed Members of the Board; and it was on this plain and simple principle, that *that* eminent statesman the Marquis of Lansdowne (as I know by a conversation I had with him on the subject), was induced, in a debate in the House of Lords, warmly to approve of the establishment of a Board of Agriculture, as the only good exertion of Mr Pitt's administration.' 7, 9.

Our readers will remember the inquiries made under the authority of the Board, concerning the best way of breaking up old grass land. This subject is noticed by the Secretary, though rather in a confused manner.

'I come now to bring to your recollection, the method and success with which this institution obeyed a requisition from the House of Lords, to inquire into, and to report the means of breaking up certain portions of grass land, as a remedy for scarcity, and laying them down again, without injury to the proprietors. The Board deliberated with great attention upon this important object, and determined, by offering considerable premiums, to call to its assistance the information of practical men in every part of the kingdom. The plan was attended with all the success that could be desired: 350 memoirs were sent in claim of the premiums; the best of them were printed at full length, and extracts from many others; forming, on the whole, a mass of full and complete information, derived from the practice and experience of men, known to have been highly successful in their agricultural exertions. No subject, in the whole range of agriculture, was ever so fully elucidated; insomuch, that from these essays might be extracted a code of such authority, that it would be a species of temerity to start opinions hostile to the general result of these performances. Contrary opinions, it may be supposed, must occur in the productions of so many writers; but when these essays are perused with a measure of discrimination, they will be found to possess uncommon merit, and to establish a variety of data, built on too solid a foundation to be departed from with safety. They contain not only a description of the grass land which may be broken up with propriety, but of that from which the plough should be absolutely prohibited: they note the crops which should be planted, as well with a view to remedy the pressure of scarcity, as to provide for more ordinary demands; and they prescribe the mode of laying down to grass, according to every variation of soil. These memoirs further contain much other incidental matter of considerable importance; and they have, in various parts of the kingdom, been successfully acted upon. The first opposition which has been formed to the principles thus established, has been in the practice of certain farmers in North Britain, who have established themselves in several of our counties, by tempting landlords with the offer of great rents, to permit the breaking up of all the grass lands of their farms; and this in districts where the grass, from age and quality, is extremely valuable. Rent, given with this view, may so far exceed the usual ratio of a district, that if the excess be placed at compound interest for 21 years, it may form a fund, more than adequate to cover the mischief which the estate sustains; and if such fund should go to the person next in the succession, no injury might to him accrue. But this is reasoning upon a supposition that will scarcely be urged or admitted. When it is considered, that there is little comparison between the steadiness in the prices of the product of grass, and the prices of corn, the latter being by far the most fluctuating;—when it is considered that these lands are a resourse, which should be preserved against the severity of famine;—and when it is further considered, that a false step cannot be recovered (for it would demand more than half a century to restore them to

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their former state)—when these circumstances are duly considered, there will be found sufficient reason to rely with confidence on the information contained in the memoirs alluded to; and seriously to question the prudence of accepting the bribe of present rent, at the expense of the future resources of an estate.' 34—38.

Now, what does the Secretary mean by stating, that the first opposition formed to the principles thus established, was in the practice of certain farmers in (from) North Britain, who have established themselves in several of our counties, by tempting landlords with the offer of great rents, to permit the breaking up of all the grass lands in their farms; and thus, in districts where the grass, from age and quality, was extremely valuable. Here it may be inquired, what were the principles established on the occasion alluded to? 1. That it would be of public utility to convert a considerable portion of the old pastures into tillage land; and in fact, this was taken for granted when the investigations were ordered, otherwise the whole were useless and unnecessary. 2. That these lands, after being ploughed for a certain number of years, might be returned to grass without waste or deterioration; and to accomplish these objects, the most suitable plans of management were distinctly pointed out. The North British farmers, censured by the Secretary, have therefore only followed out the system tacitly recommended by the Board, when these inquiries were entered upon; and the very circumstance of these farmers being able to pay higher rents on that account, proves that alternate husbandry is much more beneficial than the exclusive one formerly maintained. Either the Secretary must think that old grass should be ploughed, or that it should be kept in its present state. If he thinks in the first way, the censure bestowed is inconsistent with his principles; and if in the last way, his sentiments are hostile to agricultural improvement, which never can go forward, if one half of the ground is exclussively kept in grass, while the other half is incessantly devoted to tillage husbandry. To maintain that the old pastures should be reserved as a resource against famine, is absurdity in the extreme; for, if preserved in their present state, they cannot possibly furnish any additional supply in that year when the nation may be visited with famine. The scarcity which prevailed in 1799 and 1800 was the real cause of the inquiries afterwards made under the sanction of the Board, relative to the ploughing of old grass land; and there is reason to believe, that the result of these inquiries occasioned many acres to be ploughed, which, under different circumstances, would have been retained in grass: but the chief benefit of an alternate system consists in giving an opportunity of laying down old tillage land with grass seeds, thereby renovating its powers, and putting it in condition for carrying weighty crops of corn at an after period.

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The cannot, however, be accompliſhed, while old paſtures are ſtrictly kept from the plough. At the ſame time, the breaking up of all theſe old paſtures is not contended for; it being plain that a certain part of them muſt and will be preſerved. To have a reſource, and not to uſe that reſource, is ſurely not acting very wiſely. Such conduct is like that of the miſer, who locks up his gold in an iron cheſt, inſtead of employing it in trade, or lending it to ſome other perſon who would pay him for the uſe of it. Exactly in this way do proprietors of old graſs land act. They will neither ſtir up the ſoil themſelves, and ſearch for the vegetive riches therein contained, nor ſuffer theſe things to be done by others, though a handſome premium would cheerfully be paid for ſuch permiſſion. Had we not ſeen old graſs land repeatedly ploughed, and enjoyed numerous opportunities of aſcertaining the important advantages of ſuch huſbandry, we would have ſpoken with leſs confidence when noticing the paſſage under conſideration: but, being well acquainted with the breaking up of old graſs land, and fully ſatisfied as to the benefits which follow from putting old tillage land under the graſs ſyſtem, even for the ſhort period of five or ſix years, we could not ſlip this opportunity of expreſſing our ſentiments on matters of ſuch importance, even though they ſhould be in oppoſition to the high authority of the Secretary of the Board of Agriculture.

Mr Secretary ſoars aloft in the concluding paſſage. Some people may think he ſpreads the butter rather thick; but, on this point, we have no time to give an opinion.

'I know not an interest in the community, to which this Board has not been a benefactor; and he must be a poor reasoner, who will attribute such effects to the parsimonious grant of 3000*l.* a-year. No, Gentlemen! money would not effect this: it is the union of great talents, of unquestioned patriotism, that assembles harmoniously in this room—men of every party and description, anxious for no other emolument than the pleasure of doing good:—this is the spirit which has animated your exertions—this has merited success, and it is this spirit that will command it.' p. 69, 70.

N.

A Letter to Sir John Sinclair, Baronet, M. P., President of the Board of Agriculture, containing a Statement of the System under which a considerable Farm is profitably managed in Hertfordshire. Given at the request of the Board. By Thomas Greg, Eſq. London. 1809.

It will be recollected that Mr Greg's farm was lately viſited and examined by the Duke of Bedford and ſeveral other amateurs of agriculture, who were highly pleaſed with the ſtate of the farm, and condition of the ſeveral crops thereupon cultivated. Hence we were anxious to lay before our readers ſome information relative

tive to the ſyſtem adopted by Mr Greg; and this we are now enabled to do in the fulleſt manner, from his letter to Sir John Sinclair, Baronet, recently publiſhed under the authority of the Board of Agriculture.

Hertfordſhire, generally ſpeaking, is of excellent ſoil, but managed in a very old-faſhioned and improper way. Moſt of the exiſting leaſes bind the tenantry to follow out a three-years courſe of huſbandry, or what is technically called two crops and a fallow,—the ſame rule preſcribed for the management of common field land at the time of William the Conqueror, and obſtinately retained in many Engliſh counties, notwithſtanding of the ſingular diſadvantages which are its neceſſary concomitants. To our enlightened readers, it would be offering inſult, were we to ſhow that good land, or land indeed of any kind, required to be ſummer-fallowed every third year; becauſe every one of them muſt be convinced, that a more extended courſe is not only perfectly practicable, but alſo adopted by every agriculturiſt whoſe knowledge is above mediocrity, or whoſe practice is not reſtrained by fooliſh clauſes in leaſes, either handed down from father to ſon, through ſucceſſive generations, or dictated by ignorant conveyancers, who know no better method than to copy what had been written by predeceſſors as ignorant as themſelves. We have ſeen the land of Hertfordſhire; and think moſt of it admirably calculated for an eight-courſe ſhift; ſay for, 1. Fallow, with dung; 2. Wheat; 3. Beans, drilled at intervals of twenty-ſeven inches, and horſe-hoed; 4. Barley with ſeeds; 5. Graſs, either to be made into hay, or uſed in the ſoiling of horſes and cattle; 6. Oats; 7. Beans, drilled as already mentioned; 8. Wheat. If dung is applied either on the clover ſtubble, or after the oat crop, preparatory for beans, a better courſe can hardly be found for the ſoils which compoſe the greateſt part of Hertfordſhire.

Our Engliſh readers may perhaps be ſurpriſed that we do not include a turnip crop when mentioning this courſe; but we obviate the objection by ſtating, that this valuable eſculent may be taken on ſuch parts of the fallow break, or upon the break No. 7. for beans, as are calculated for rearing it to advantage. We are perfectly ſatisfied of the utility of turnips in every modern rotation, whether conſidered as an article abſolutely neceſſary where ſtock is kept, or as the means of manufacturing ſtraw into dung; but cannot include this eſculent as a regular crop where the ſurface ſoil is of a heavy nature, or where the ſubſtratum is of a retentive kind. Under theſe circumſtances, agriculturiſts muſt judge for themſelves when or where turnips may be cultivated ſucceſsfully; but we can tell them with confidence, that, on a tenacious clay ſoil, they will neither cultivate them ſucceſsfully, nor to much advantage as a regular cleaning crop.

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In making these preliminary observations, we have paved the way for what is to be stated respecting Mr Greg's manner of cropping. When we differ from him, it shall be done with diffidence; and this diffidence is increased by a firm conviction, that his mode of management is infinitely superior to what is ordinarily practised by the generality of his neighbours.

According to the old course of Hertfordshire husbandry, upon a farm of 240 acres, there were 80 acres annually unproductive, and no more than 160 acres under crop; in other words, there were 40 acres carrying wheat, 40 acres barley, 50 acres peas, beans, or oats, and 30 acres clover. Under such a system, it is obvious, the returns could not be great, nor the profit considerable; therefore we perused the following statement without feeling surprise, even though the rent is estimated at twenty shillings per acre.

'*System of Management and Expense of Cultivating Two Hundred and Forty Acres of heavy Land in Herts, arranged by Mr Thomas Mickley, who occupied a Farm of that description for Fifty Years under the Earl of Hardwicke.*

	L.	s.	d.
80 acres for summer fallow, 4½ times ploughed and harrowed, at 3*l.* per acre,	240	0	0
10 acres of the above sown with turnip-seed: sowing and hoeing 12*s.* per acre,	6	0	0
40 acres sown with 2½ bushels of wheat: seed and sowing 30*s.* per acre,	60	0	0
20 acres folded, 2*l.* per acre,	40	0	0
Carting, filling, and spreading dung, made upon the premises, upon 20 acres of the above wheat land, at 1*l.* 5*s.* per acre,	25	0	0
40 acres sown with barley: seed and sowing 1*l.* 5*s.* per acre,	50	0	0
Light manure purchased for 20 acres, at 3*l.* 10*s.* per acre,	70	0	0
25 acres sown with peas and beans: seed and sowing 1*l.* 12*s.* per acre,	40	0	0
25 acres with oats: seed and sowing 20*s.* per acre,	25	0	0
80 acres ploughed for the above crop, 12*s.* per acre,	48	0	0
80 acres harrowed twice, at 2*s.* per acre,	8	0	0
30 acres sown with clover upon the wheat: seed and sowing 12*s.* per acre,	18	0	0
Shepherd's wages forty-eight weeks, at 10*s.*	24	0	0
Expenses of harvest,	120	0	0
Ditto, making, carting, and stacking five acres of clover-hay, 20*s.* per acre,	5	0	0
Rent,	240	0	0
Tithe,	72	0	0
Poor's rates,	60	0	0
Carry over,	L.1151	0	0

Brought over,	L.1151	0	0
Highway duty,	6	0	0
Weeding one hundred and sixty acres, at 2*s.* per acre,	16	0	0
Hollow draining, in every year twelve acres, at 2*l.* 10*s.* per acre,	30	0	0
Carting corn to market,	33	10	0
Thrashing corn—200 loads of wheat at 2*s.* 6*d.* L.25 0 0			
Ditto, 200 quarters of barley —— 25 0 0			
Ditto, 75 ———— oats at 1*s.* 6*d.* 6 0 0			
Ditto, 100 loads of 5 bushels, peas, 7 10 0			
	63	10	0
Contingent expense of labour, &c.	25	0	0
	L.1325	0	0

'*Produce arising from the said Farm of Two Hundred and Forty Acres, conducted according to the System, and at the Expense before explained; Quantity of Corn taken at an Average of Years; Prices taken at the present Year*, 1809.

	L.	S.	D.
40 acres sown with wheat, at twenty-five bushels per acre, 11*s.* per bushel,	550	0	0
40 acres sown with barley, at forty bushels per acre, 5*s.* 6*d.* per ditto,	440	0	0
25 acres sown with peas, at twenty bushels per acre, at 7*s.* per ditto,	200	0	0
25 acres sown with oats, at twenty-four bushels per acre, at 4*s.* per ditto,	120	0	0
25 acres of clover, profit arising from the keep of eighty ewes for one year, twenty-five acres of clover allotted to them,	80	0	0
5 acres of clover, mown and converted into hay, at 7*l.* per acre,	35	0	0
Straw from one hundred and thirty acres of land, valued at 20*s.* per acre,	130	0	0
N. B. In the original, these articles are erroneously stated to be 1610*l.*	L.1555	0	0
Amount of expenses,	1325	0	0
	L. 230	0	0

Profit one year,	L.230	0	0			
For six years,	6					
	L.1380	0	0	profit in six years.		
Profit one year on the new system,	L.1117	0	0	Profit on the old system for six years,	L.1380	0	0
	6			Balance in favour of the new system,	5322	0	0
For six years,	L.6702	0	0		L.6702	0	0

'*Disadvantages*

'*Disadvantages of the Old System.*

'1. A plurality of ploughings, which expose the land to be impoverished by a summer sun;

'2. The unnecessary expenses of these ploughings, as far as they relate to labour;

'3. The wear and tear of horses, ploughs, harness, &c.;

'4. The rent and taxes of one year without return;

'5. The inefficiency of summer ploughing to destroy weeds propagated by seed, twitch excepted;

'6. The deprivation of turnips to the amount of thirty acres;

'7. The little stock they are enabled to keep;

'8. The deficiency of manure arising therefrom, and the impoverished state to which that little is reduced, by bad management;

'9. The expense they are subject to, in order to supply this deficiency;

'10. The deficiency in the crops of oats, peas, and beans, which lateness of spring ploughing occasions;

'11. The abundance of annual weeds they raise within the influence of the air to vegetate, and the impossibility of cleaning those crops.'

Speaking of his farm, Mr Greg describes it in the following accurate manner.

'The land I occupy is a very tenacious clay, in some places mixed with calcareous earth: this naturally causes it to bind at top after heavy rain. It is only troubled with surface water; and from the length of time the county of Herts has been in cultivation under very bad tillage, the soil is impregnated with weeds of every description. If you dig a pasture which has remained undisturbed for centuries, almost every variety of weed will immediately appear. My object was therefore (it being almost hopeless to subdue them) to prevent their injuring the crops. To meet the general principle upon which I set out, I began to plough my land as soon in the autumn as the wheat is sown, commencing with that which is the wettest. But previous to that, I mark it out by a very simple instrument, no more than a beam of the length of five feet and a half, with a peg at each end which fixes upon a drill carriage: that operation is followed by a plough, which ploughs a bout in each furrow, to the depth of four inches. The marking is performed by a man, a boy, and a horse, at the rate of ten acres per day.

'The bout is ploughed by a man, a boy, and two horses, at the rate of five acres per day. This work is performed by the man who sows the land; for upon the accuracy of this work, the facility and success of every subsequent operation depend. The size of the lands being thus laid out, the most ignorant ploughman can complete the work. The ploughing is performed by a Suffolk swing plough, with a cast iron breast, and wrought iron share, upon a construction to form a perfect trench of seven inches deep, and eight wide. This requires four bouts to complete a land of five feet and a half. Thus water is prevented from remaining upon the land intended to be cropped; but will be drawn into the ten inch furrow to give rapidi-

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ty to its progress through, and off the beds. The outside bout of each land is ploughed two inches deeper, and from thence the water runs into cross furrows, which are dug with a spade still deeper, to give facility to the water to run off, and drain the bed.

'In ploughing this land in the autumn, or before Christmas, there is obtained, by the influence of the frost during the winter, a perfect friability in tilth to the depth of the ploughing; and by the soundness of the ploughing, the surface water is as completely got rid off, as by under draining; which is usually performed at an expense of 8*l.* per acre, before the heavy lands in my district can be rendered productive. Having thus produced friability by the aid of frost, and released the land from tenacity at bottom by taking off the water, it is in the spring in a state for sowing, whenever favourable weather arrives. I will now take up the land in the spring, when I begin to sow beans. I flatten the lands which lay very round in the winter, and loosen them at bottom from the under stratum. I have an instrument of great power, called a *scarifier*, for this purpose. It is drawn by four horses, and completely prepares the land for the seed at each bout. This is not the only advantage of it; for it again disturbs and lacerates the top-rooted weeds, which are reversed by the plough in the winter, and does not in its operations raise any seeds within the influence of the atmosphere to vegetate amongst the spring crop: the harrowing before and after the drill, having in a great degree destroyed the effect of such seeds as the plough turned up to the surface in the winter.' p. 10—12.

Again, Mr Greg says,

'The course of cropping I follow, is derived from information received from many very intelligent friends; but for the knowledge which enabled me to perfect the system, I am wholly indebted to Mr Coke. The introduction of two years' clover-layer enables me to complete a system, for the management of a heavy land farm, which renders it self-subsisting; and without such independence, it must have remained imperfect.

'The farm I at present occupy consists of two hundred and forty acres of arable land, principally a tenacious clay: this I divide into six parts, allotting, as nearly as possible,

40 acres for Turnips.
40 ——— Barley or oats, sown with seeds for two years.
80 ——— Grass.
20 ——— Pease, } on the layers.
20 ——— Beans, }
40 ——— Wheat, on the bean and pea stubble.

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'As soon as harvest is completed, I haulm the wheat stubbles; mark out the land; and plough a bout: then dung, to the amount of ten loads per acre, is spread, keeping it out of the furrow. It is afterwards ploughed in, and three bushels of winter tares, with one bushel and a half of winter barley sown. I am very certain this plan of sowing tares to precede turnips, may be carried to the extent

tent of one half the land so destined, and in a common season not interfere with the turnip crop; particularly if you sow turnips, as you cut the tares, upon a moist furrow. I must here lament that the qualities of winter barley are not sufficiently understood: used as a green crop with tares, it corrects their purgative tendency, and, as a crop to stand for corn, may be fed off many times, to the great aid of those farmers who keep ewe-flocks; it produces in the spring abundance of food, and will correct a disposition to scour, when the flocks have been removed from the tops of turnips. I have fed it as late as May day: Mr Reeve of Wighton, Norfolk, last year fed his ten days later, and afterwards had a very great crop of corn.

'The tare sowing being finished, I begin to prepare the bean and pea stubble for wheat, being convinced that sowing very early is the best security against the injury of blights. Last year my sheep were feeding upon the wheat, when my neighbour was only sowing it. The straw of both was blighted; but the advanced state of mine to maturity, secured the grain from injury, while that of my neighbour was of very little value.

'In heavy lands it is very difficult to prepare the bean and pea stubbles for wheat, at so early a period as I could wish to sow them; particularly so, last autumn. The labour they required was so great, from the plough, roll, and harrow, as to induce me to try if the scarifier would raise a depth of mould sufficient to cover the seeds. It performed the operation well; and should the part so managed, look as well at harvest as at present, I shall continue to use the scarifier instead of the plough; by which means I can sow in the season forty acres of wheat in a very few days, regardless of weather, and at a sixth part of the expense.

'Having made various experiments to ascertain the best distance to drill wheat, I am satisfied that from eight to nine inches will give a better crop, and leave a sufficient space to perform all the hoeing which is safe to practise upon it. The five feet lands therefore contain seven rows, at five inches interval. It may strike the Board, that a considerable space is left by the furrow in an unprofitable state: but when it is considered, how essential it is to keep wheat dry during the winter, they will be convinced that the supposed waste is indispensably necessary.

'Having sown the wheat, and provided tares for soiling the horses in the spring, I begin to plough and dung the remainder of the land intended for turnips: also plough for beans and peas. It is desirable this should be done before Christmas. As soon as the season turns, I first scarify the land which was lea, and intended for beans and peas; and, as soon as growing weather commences, drill the beans at fifteen inches interval, for the convenience of horse-hoeing. The peas are next drilled; but these are at twelve inches interval: as these, by falling over, preclude the possibility of hoeing them more than twice, it is therefore necessary to consider them a smothering and sheltering crop. I have this year sown three double rows, and four single rows of both beans and peas upon each land, which leave the same interval of fifteen inches for hoeing. The result of this experiment

riment I shall have the honour of laying before the Board at a future period.

'As the ground is cleared of turnips, it is ploughed into lands. In the spring, the barley is drilled at intervals of eight inches, not leaving any space for furrow; and the clover, rye-grass and trefoil sown up, and then across the lands: the rye-grass in the same way. Horse-hoeing not being practicable, the whole land of course is sown, which gives eight rows on each land: the crop is superior to those of my neighbours, sown upon fallow, and the grass regular and luxuriant.

'As soon in May as the weather permits, and the sun is sufficiently powerful to kill weeds, I set the scarifier to work, succeeded by a strong harrow. Having by these operations obtained cleanliness, I use the first favourable weather to sow Swedish turnips in twelve-inch rows, that is, five rows on land. Of this work, the land being prepared, I can perform, with two drills and a relay of horses, fourteen acres a day. If my plants should prove deficient, I harrow white turnips amongst them; and if they fail entirely, drill an entire crop of white turnips: and should *these* fail, I sow cole-seed. This resowing is performed with great despatch and facility by the scarifier and drill.

'There are difficulties in feeding off turnips on heavy land; but by a little attention they may be removed: first, by having leas contiguous to the turnips for the sheep to retire upon after feeding, or by drawing the best or half of the turnips, and feeding the sheep in a well littered yard, giving them a bait of clover-chaff night and morning. For carting them off, I remove the shafts, and substitute a pole; the horses by this expedient walk in the furrows. This winter I kept five hundred and fifty sheep in the yard: they did very well, and produced a considerable quantity of dung. The sheep feed off the turnips along the land, and every fold course they finish is ploughed. By this means, the solidity which is produced by the treading of the sheep, is restored to tenderness by the subsequent frosts. Even in March there are frosts to render friable the shallow ploughing required for barley; in light lands the scarifier is preferable to the plough.

'The turnip crops vary as on light lands. In heavy cold soils the plant does not vegetate so quickly; and, being longer in an infant state, the success is to a degree more precarious. But the advantages I derive from ploughing the dung in, without its ever having been exhausted by being turned over, and thus impregnating the land with its volatile and most active parts, &c. and having the land ready to sow whenever growing weather arrives, place my crops under very favourable circumstances.' p. 13.—15.

With regard to the management of grass leas, Mr Greg gives a precise description. He says,

'The artificial grass leas I could wish to conduct upon a system, viz. of giving half to the sheep early in the year, and mowing the other half, and *vice versa*: what they have the first of, I mow the

second; and what is mown the first, they have the second. All soils will not retain clover the second year, therefore the management in this way is deprived of certainty. Where the sheep feed, there they lye enclosed at night in a spacious fold; so that my land has ten to twelve loads of dung-dressing, and two thirds of tail-dressing by sheep every six years: this, added to the other management of my dung, and hoeing, keeps it in a state of health, sufficient for every purpose, without the purchase of manure. I should not here take notice of the number and management of the beasts, (as these apply to the grass lands), but the manure being applicable to the farm, I think it necessary to mention that I winter from forty to fifty head, all of which are tied up in sheds during the winter, and racked with straw, having a bait night and morning of chaff, composed of hay and straw: the quantity of this is regulated by the state of gestation of the cow, or the desire of preparing a proportion of the dry stock for early and progressive beef. I am convinced the saving in fodder is one third, besides the protection from injury afforded to the timid. By cutting the meat, you become the judge of what they shall eat; and by keeping them dry, quiet, and warm, you promote health and condition to all, without the waste attendant on promiscuous feeding. Being confident that frequent exposure and disturbance injure the quality of the dung as well as of the land, I strictly govern my farm upon that conviction. Every three weeks, when the dung begins to heat, the sheds are cleared out, and their contents deposited contiguous to the growing crops of wheat, to the stubble of which land it is devoted. Round it there is a trench, with cess-pools to receive the oozings, which are returned upon the heap.' p. 16.

The system of management, with the accounts of expense, and amount of produce, are next detailed. These are given with considerable precision; only we must remark that, from what is stated, there does not appear to be any property-tax collected in Hertfordshire.

'*System of Management, and Expense of cultivating 240 Acres of heavy Land in Herts, according to the Plan pursued by Mr Greg.*

	L.	s.	d.
Rent	240	0	0
Tithe	72	0	0
Poors' rate	60	0	0
Highway duty	6	0	0
Ploughing one hundred and sixty acres of land once, at 17s. 6d. per acre	140	0	0
Carting ten loads of dung per acre on forty acres, with loading and spreading at 25s. per acre	50	0	0
Scarifying eighty acres twice, at 4s. per acre	16	12	0
Harrowing and sowing one hundred and twenty acres, at 2s. 6d. per acre	15	0	0
Carry over	L. 599	12	0

Brought over	L. 599	12	0
Horse-hoeing and hand-weeding forty acres of wheat, 3s. per acre	6	0	0
Ditto ditto peas and beans twice, at 4s.	8	0	0
Carting of hurdles, and other labour for the farm for one year, not included in the specific charge	10	0	0
Contingent expenses incurred by employing labourers during the same period	25	0	0
Shepherd and his boy for one year	40	0	0
Cutting, making, carting and stacking forty acres, first and second crop of clover, at 25s. per acre	50	0	0
Hoeing forty acres of turnips, at 12s. per acre	24	0	0
Carting corn to market	33	0	0
Seed for forty acres of wheat, at 22s. (two bushels per acre)	44	0	0
Ditto barley, at three bushels per acre	30	0	0
Ditto for twenty acres of beans, at three bushels per acre, 7s. per bushel	21	0	0
Ditto peas ditto 8s. per do.	24	0	0
100 lib. of turnip seed, at 2s. per lib.	10	0	0
400 lib. red clover seed, at 5*l.* per cwt.	20	0	0
20 bushels of rye grass, at 4s. per bushel	4	0	0
White clover and trefoil, valued at	20	0	0
Harvest expenses	120	0	0
Folding fifty-five acres, at 2*l.* per acre	110	0	0
To seed, and sowing five acres of tares and winter barley, at 3*l.* 3s.	15	15	0
To ten loads of clover hay for sheep at 5*l.*	50	0	0
To run of sheep on pasture in bad weather, say twenty-five score, at 3s. per score for ten weeks	37	10	0
To thrashing two hundred loads of wheat, at 2s. 6d. L. 25 0 0			
Ditto, two hundred quarters of barley, at 2s. 6d. 25 0 0			
Ditto, eighty-eight quarters of beans, at 1s. 6d. 6 12 0			
120 loads of peas, at 1s. 6d. 9 0 0			
	65	12	0
	L. 1367	9	0

'*Produce arising from the Farm of* 240 *Acres, conducted according to the System pursued by Mr Greg. Quantity of Corn taken at an average of Years. Prices taken at the present Year.*

	L.	s.	d.
40 acres of wheat, at twenty-five bushels per acre, 1000 bushels, at 11s.	550	0	0
40 acres of barley, at forty bushels per acre, 1600 bushels, at 5s. 6d.	440	0	0
20 acres of beans, at thirty-five bushels per acre, 700 bushels, at 7s.	245	0	0
20 acres of peas, at thirty bushels per acre, 600 bushels, at 8s.	240	0	0

 Carry over L. 1475 0 0

Brought over	L.1475	0	0
40 acres of clover, twice cut, at two tons per acre, 9*l.* per acre	360	0	0
Straw off one hundred and twenty acres of land	120	0	0
Produce of five hundred sheep from Michaelmas to Michaelmas	500	0	0
5 acres of tares for soiling horses	30	0	0
	L. 2485	0	0

New System.

One year's profit	L. 1117	11	0
			6
Six years	L. 6705	6	0

Old System.

One year's profit	L. 230	0	0
			6
Six years	L. 1380	0	0

New system	L.1117	0	0	Old system	L.1380	0	0
			6	Bal. in favour of new system	5322	0	0
	L. 6702	0	0		L. 6702	0	0

Though we highly approve of the deviation, or rather complete departure, made by Mr Greg from the antient ſyſtem of Hertfordſhire, yet we are not ſure whether he might not have introduced a much better ſyſtem than the one adopted, for land ſuch as he deſcribes to be in his poſſeſſion. Turnips are not to be depended upon, on clay ſoils; and if a failure is met with in the firſt inſtance, his ſyſtem is completely overturned. It may be ſaid, that a *sticked* crop of turnips always make a good fallow. This we allow; but then, what is to come of the ſheep, upon which branch of ſtock no leſs than 500l. profit depends? We are almoſt ſure that the eight-courſe ſhift we have pointed out, would yield a produce of greater value than the one he has adopted; whilſt, in our humble opinion, it is better calculated for ſuch ſoil as he poſſeſſes.

We refrain from making any obſervations upon the radical defects of Mr Greg's ſyſtem, becauſe they muſt be obvious to every one practically acquainted with the culture of clay ſoils. In one word, it may be ſtated, that if the Board of Agriculture ſhall diſcountenance the practice of ſummer-fallow upon wet and heavy ſoils that require to be cleaned, and can only be cleaned during the ſummer months, more miſchief may thereby be done to Britiſh huſbandry, than can at preſent be recogniſed and aſcertained. N.

BRANCH III.

AGRICULTURAL INTELLIGENCE.

THOUGH the summer quarter could not, on the whole, be viewed as unfavourable to rural operations, yet the weather was often adverse and unfriendly to the growth of the several crops. The month of June opened under circumstances singularly adverse, both frost and snow having for some days prevailed over the greatest part of the island. From these enemies to vegetation the winter wheats received a blow, which has not, in numerous instances, been overcome. The clovers also suffered materially at that period; and land destined for turnip was thrown quite back in the working by the rains which immediately followed.

July, however, furnished more genial weather, which, to a certain extent, remedied the evils of the preceding month. From our accounts, wheat, in general, may be estimated rather below than above an average crop; though it is dreaded that the dampness of the weather, during the blooming process, has in several respects lessened its productive powers. Besides, in many districts, yellow gum has appeared on the ears; whilst, in others, the stalk is blasted, and, of course, incapable of conveying further nourishment to the grain. Oats are generally considered by our correspondents as a full crop: so are Peas and Beans. Barley again is reported to be good on barley soils, but miserably bad on those of a different description.

As for the grain markets, prices have rather advanced through summer, notwithstanding of a considerable importation of wheat from America and France, and of oats from Ireland and Holland. From full information concerning last year's crop, we were always sure that a rise would occur through the summer quarter; therefore, the steadiness of markets, hitherto, must be entirely attributed to the extent of foreign importation. With regard to the markets for cattle and sheep, a steady and an increased demand has prevailed for several months, to the great benefit of the breeding districts, who were previously in a languishing and unthriving state. The advance, however, has been greater upon cattle than upon sheep. The first article, it is believed, has risen nearly thirty *per cent.*, whereas the rise on the other cannot be calculated at more than fifteen *per cent.* Cattle are now become very scarce in many breeding districts.

We have not heard of any inquiries under the authority of Government to ascertain the hardships of the tenantry under the present administration of the Property-tax; but it is not doubted that such will soon be made, though very probably not in the most efficient and effectual manner. To refer the grievances of the farmer to the gentlemen of the tax-office, would be doing nothing to the purpose; for, from them, redress need not be looked for. We do

not say that these gentlemen are to be the agents of inquiry, though such a report has reached us; but we certainly may affirm, that they would be the worst agents that could possibly be employed. We speak our mind with freedom; and earnestly implore that, if the subject is to be investigated, the investigation may be carried on by people who are neither biassed nor prejudiced. In any other way inquiry would be mocking the complainers; and, without procuring a single benefit, might serve to lull them asleep, till their grievances were either forgotten, or considered as irremediable. For a new view of the Property-tax act we refer our readers to the petition from the farmers of Dumbartonshire to the Commissioners there, wherein the subject is most ingeniously investigated.

No petition from Scotland was presented to Parliament concerning the Property-tax, except the one from the farmers of the county of Haddington, the others being kept up till it was seen whether relief could be obtained in a voluntary manner. We have always thought and said, that as the rule of assessment was a very convenient one, it would not be relaxed or altered, unless a very general appearance was made in behalf of the tenantry—an appearance, far exceeding any thing hitherto displayed on their side. The Haddington petition was presented by Lord Binning, a young nobleman of great expectations, and well qualified by nature for entering into the details of public business. This noble personage is lately appointed to a seat at the India Board—a place admirably calculated for the display of his abilities, though insufficient, it is to be hoped, for engrossing the whole of his attention, or preventing him from attending to the agricultural and commercial interests of the country, in the way hitherto manifested.

In our last Number, the endeavours of the Dalkeith Farming Society to procure a complete reaping machine, were noticed with applause; and the subject is resumed, in order that the public may be enabled to entertain a just sense of the obligations due to that Society. At this time we cannot do better than transcribe the letter politely sent us by the secretary of the Society, after a report was made by the committee specially appointed to examine the several models submitted to their consideration.

'Sir, In compliance with your request (communicated by Mr James Cuthbertson), I am desired by the Dalkeith Monthly Farming Club, to send you a short account of the manner in which the competition for the premium, offered by them for the best model of a machine for reaping corn, was conducted.—You will recollect, that, at the June meeting, the committee ordered *four* to be retained for further consideration; viz. those invented by Messrs Alexander Scott, Ormiston; Charles Umpherston, Lasswade, Loanhead; Thomas Wilson, Dalkeith; and William Carthrae, Dalkeith.—The same committee met on Thursday last; when, after an attentive examination, and having heard them minutely described by their respective inventors,

ventors, they adjudged the premium of twenty guineas to Mr Scott.—The chairman of the committee having reported their decision to the Club, it was resolved, that orders should be given to have a complete machine constructed from Mr Scott's model, at the expense of the Society, and that Mr Scott should be requested to superintend the execution of the work, which he cheerfully agreed to; he, however, wished it to be understood, that it could not be finished in time for having it tried this harvest. The expense, he said, would probably not exceed 50*l.*—In consequence of a recommendation from the committee, the meeting likewise resolved, that complete machines should be constructed by Messrs Umpherston and Wilson, from their models, at the expense of the Society; which they undertook to perform,—the former for 25*l.*, and the latter for a sum not exceeding 20*l.*—From the terms of the offer held out in the advertisement from the Club, the premium of three hundred guineas can only be claimed by Mr Scott; to whom the twenty guineas have been adjudged: It therefore became a question, from what source any remuneration could be given to Messrs Umpherston or Wilson, in the event of their machines being found, upon trial, to give satisfaction.—After a long conversation, it was agreed, that if either Mr Umpherston's or Mr Wilson's machine shall be found to be efficient, and preferable to Mr Scott's, a sum shall be raised by voluntary contribution amongst the proprietors and farmers of this and the adjoining counties, as a reward for their ingenuity.—It having been represented, that Mr Carthrae had incurred a very considerable expense in constructing his model (it being upon a large scale, and entirely of malleable iron), the meeting agreed to allow him 10*l.* by way of indemnification. I am, &c. WILLIAM DOUGLAS, *Sec.*'

It becomes us to express the sense entertained of the obligation conferred by the Society, in thus handsomely communicating to us the result of their deliberations respecting that important implement, the reaping machine, which, under their auspices, we trust, will be brought to something like perfection, and rendered of inestimable benefit to the public. But the liberal sentiments which have animated the members of the Society on this occasion, cannot be passed over in silence; because they have shown themselves above every narrow or selfish impression, and resolutely disposed to administer the whole business in a way highly commendable and praiseworthy. They have not confined themselves to the strict letter of their offers; but handsomely stepped beyond them, and given assistance to other ingenious mechanics besides the person considered to have prepared the best model: and in ordering complete machines to be constructed upon the principles of other models than the one which obtained the premium, the Society must be considered as acting in a most exemplary and meritorious manner. To those who remember the invention of the thrashing machine, what a striking contrast will appear betwixt the proceedings of the Dalkeith Farming Society and that of the honourable members who sat at the Board of Trustees

for Improvements, &c. in 1789, when the merits of that noble implement were taken into consideration! Influenced by prejudice, or some unaccountable motive, the honourable members alluded to bestowed a small premium (twenty guineas, we believe) on a Mr Cotterel, who had constructed a kind of toy for thrashing corn; and passed over the efficient implement devised by that worthy and ingenious mechanic, Mr Meikle, without noticing it in any other way than giving Mr Meikle 15*l.* for the model he had exhibited, though no other machine was ever invented capable of executing the arduous task of separating corn from the straw in a complete and perfect manner. Whatever moralists may say, the world is certainly turning wiser; and, were doubts entertained on that point, the contrast thus offered, would furnish decisive proof of the increase of human wisdom.

Before finishing the article, it may be stated, that should a public subscription be necessary in aid of the views of the Dalkeith Society, the Conductor of this Work will not only come forward in support of it, in his private capacity, but also pledges himself, in name of a numerous body of friends, to render every assistance in their power, that can be reasonably expected.

SCOTLAND.

Wigtonshire Quarterly Report.

The first half of June was unusually cold, rainy and tempestous. Snow fell upon the high grounds, and hail and frost were pretty universal. This, after a dry cold May, was very unpromising; and moist low grounds particularly suffered. The after part of June, however, and the early part of July, being fine genial weather, compensated, in a great measure, for the inclemency of the former part of the quarter. This was succeeded by a pretty severe drought, which much injured the crops on thin dry grounds; but a charming shower has fallen upon the evening of the 27th instant, from which very considerable relief may be expected. Artificial hay crops are generally light, but well saved. Meadow, or bog hay, is in hands at present. All sorts of crops, where exposed, but especially potatoes, were scorched exceedingly by a violent gale of northerly wind, which blew with little intermission from the 16th to the 19th; and the warm dry weather for eight days afterwards, added greatly to the injury. Notwithstanding these circumstances, appearances are not unfavourable; and crops have a fair chance of being productive. For black cattle of all ages, the demand has been great, and prices abundantly high. From the very spirited and laudable interference of a respectable part of the farming interest in Scotland, and the promises of the Chancellor of the Exchequer, it is understood that there is a fair chance of redress being obtained in next session of Parliament from the hardships of the Property-tax as at present levied. It is presumed that these favourable appearances induce the tenantry of those counties who have not yet petitioned, to remain inactive for a time, under the idea that their interference may be unnecessary; but if they are disappointed

pointed in this expectation, no doubt need be entertained that every county in Scotland will come forward in order to obtain constitutional redress, from one of the most unequal and oppressive burdens that ever was imposed upon any class of subjects in a free country; and for the able discussions upon which, the country at large are under the highest obligations to the Conductor of the Farmer's Magazine.——*28th July.*

Banffshire Quarterly Report.

RURAL matters during this quarter may be reported as more favourable for the farmer than for several years past. The cattle trade, which commenced at an earlier period of the season than usual, has continued uncommonly brisk; and prices are now so much advanced, as to exceed those of the last year from 30 to 35 *per cent.* It is now thought that the country is getting thin of stock, as appears from some of the late fairs being so little crowded. Cattle on hand are in high condition; and the pastures have all along been uncommonly abundant. Although the weather, at different times, has been rather upon extremes, and several severe blasts have been experienced; yet, upon the whole, the season has been favourable to vegetation. Oats in general appear to be unusually luxuriant, and so are some of the early barleys; but, where this grain was late sown, and especially after turnip, it appears very deficient. As this article, however, only occupies a small breadth of ground, the general produce will be little diminished by its failure. What wheat we have is not amiss; and if disease keeps off, which is not apparent as yet, it may give in a fair return. If the weather should continue favourable, the crop, upon the whole, may be expected to exceed an average; but as so much depends upon this, a conjecture can scarcely be hazarded at this time in such a climate as Banffshire. Harvest is not expected to be early. The hay crop does not come up to what was expected early in the season; but may be noted as little short of an average: the greater part remains in the field; and if the moist hazy weather continues, which prevails at present, it must be materially injured.—The turnip failure, so much complained of in other districts, does not appear to be prevalent here. With the exception of some that were sown about the 10th June, when the land was too wet, and afterwards became crusted, they in general look healthy, and can scarcely be overtaken with the hoe. It is the practice with many farmers, in this district, to raise their own seed, and a failure from bad seed is little known. The yellow kind has been more sown this season than ever.——*28th July.*

Morayshire Quarterly Report.

ALTHOUGH no given season can ever apply equally well to the soils in this county, which vary from the lightest sands to the richest clays; yet, on the whole, the present has been favourable; and, where the ground was properly tilled, which is by no means universally the case, our crops of all descriptions (barring wheat on the clays) look well, and will now be greatly meaded by the rains, which have

set

set moderately in.—Turnips have vegetated uncommonly well, and the fly seems to have made no impression upon them. Although they are not so forward as in some former seasons, it may be presumed that temperate weather will now insure a fine crop.—Hay as to quantity is only middling; but has been saved in the best possible condition. Potatoes promise well; and although hitherto that root has not been raised in quantities much beyond family consumpt, the farmers have begun to use them steamed for horses. The Morayshire Farming Society have opened a subscription, which already amounts to nearly 600*l.*, to be lent on proper security to a person versant in curing pork for export; believing that the soils of this county are peculiarly adapted for raising potatoes, and that ample remuneration will be obtained by consuming them on the farm, when steamed, in the rearing and feeding of swine; while at same time much valuable manure will be obtained, and the complaint of that root not making proper returns in this respect be done away. Cattle of all descriptions were never more saleable, and prices are high; the country seems absolutely drained, for the present, of decent stock, by the demand for last two months. Grain continues at stationary prices. Barley 32s. to 35s. per 4 firlots; oats 32s. to 34s. per 5 firlots, nearly equal to a Winchester quarter; wheat 40s. to 41s. per bushel, about 7½ *per cent.* better than 4 bushels; and there is a sufficiency of all for home consumpt until harvest.——*29th July.*

Aberdeenshire Quarterly Report.

During the last quarter, the weather has, on the whole, been moist and rainy; more so than for several years bypast. From this cause turnips were sown under great disadvantage; are still backward in growth for the season; and in many places scarcely promise a crop worth the expense of cultivation. Potatoes are getting forward in growth; but are not quite so far advanced as usual at this period. New potatoes are selling at 2s. per peck of 8 pints, at Aberdeen. Hay is a full crop, generally far above an average, and fortunately came from the scythe during a week or two of dry weather, which allowed it to be got into tramp coles (small stacks, generally of about 100 stone each), in good order. This was of great consequence, as the weather has again turned rainy. Pasture grass was never seen in greater plenty or of finer quality. Wheat and barley are thin on the ground, and do not promise the usual return. Oats are very full and luxuriant; they promise plenty of grain and abundance of straw: but as every kind of crop is a week or two later than usual, much will depend on the weather in the month of August.

There is no difference in the price of grain since the date of last report. The markets are regularly supplied; and there remains a sufficiency to meet the demand until the new crop is harvested. Cattle of every description have risen at least 25 *per cent.* during the last three months. This rapid rise may be partly attributed to scarcity in the article of winter provender for two years past, which reduced their numbers greatly in all the breeding counties, and partly to

to the great demand from the South. Sheep have also risen in value; but not in the same proportion as cattle, the advance on them being only from 12 to 15 *per cent.* Good horses maintain very high prices, and are rather a scarce article. There is no variation in the price of labour. During the quarter, the market at Aberdeen has been liberally supplied with excellent beef and mutton at from 5d. to 7d. per pound.——30*th July.*

Letter from a Farmer near Langholm, 31*st July.*

'The state of the weather, since my last, has varied considerably. From the 24th of May until the middle of June we had a succession of cold rainy days; during which period, neither the grass nor corn crops made the usual advance expected at that period of the season. From the 18th of last month till within these four or five days, we experienced an almost uninterrupted course of dry warm weather. The soil being fully saturated with moisture at the period when the drought commenced, the effect produced soon became visible on the light gravelly or clay soils; and the crops are, consequently, less bulky and luxuriant than what the early part of the season had promised. In some instances, from the extreme drought, they have assumed a rather unhealthy aspect, or the appearance of premature ripeness. Oats are generally short of straw. Barley and peas have a promising appearance. Turnips have almost universally failed through this district. Those early sown suffered severely from the ravages of the fly; and, from the long continued drought, such as were sown at a later period have been prevented from vegetating. In several instances the seed has proved of a bad quality. Very few fields afford what may be called a decent average crop. Potatoes, though not exhibiting such a full growth of stem as usual, have, however, a healthy and thriving look.

'In the upper part of this district both the season and the state of the markets have been highly favourable to the interests of the stock farmer. The dry warm weather which has prevailed during the latter part of summer, has tended greatly to promote the health, as well as the improvement and thriving condition of the flocks upon the moorland farms. Rough sheep have been in great demand this season, being bought up with eagerness and at advanced prices. At our annual wool fair at Langholm, on the 15th instant, there was a brisk demand for that article, with an advance of price of from six to nine shillings per stone higher than last season. The average price might be about a guinea and a half per stone of sixteen pounds. At our lamb fair, on Wednesday last, there was a good show of lambs. The sale was rather slow, owing to the very high prices asked by the sellers; and the demand was not so great as had been expected; but good prices were given, making an advance of from two to three shillings a head above those of last year. Our victual markets, which are mostly supplied from the neighbouring districts, have continued pretty steady during summer; and the present appearance of the crops does not seem to warrant any material alteration.'

Dum-

Dumbartonshire Quarterly Report.

SINCE last report the weather has been good. The transitions from heat to cold were sometimes sudden: but we have had moderate and well-timed rains, which kept every thing in a progressive state of improvement.—Wheat is still thin on the ground, though much improved. Oats are remarked to be more vigorous and promising than usual. Beer thin and light. Potatoes generally looking well, though they are backward in some parts. Hay was thought light and thin when growing, but it has been all saved in the very best order, which will, perhaps, make up the deficiency. One general remark may be made;—none of the grains are lodged, and, if the weather continues favourable, there is every appearance of a fair average crop.

A petition to the House of Commons against the present mode of assessing the Property-tax upon farmers, was prepared in this county, and subscribed by a considerable number. Parliament was adjourned, however, before the subscriptions were closed; but it will still be presented next session, unless relief is obtained before that time.

Your correspondent in Upper Annandale mentions a steaming apparatus that has been used in that district with great success, which is simple, and executes the work almost to any extent wanted. This is a subject of great importance; and it would be obliging several farmers here, as well as generally useful, if, in next Number, he would give us such a description, as that similar ones might be erected from it.

A copy of the petition from the farmers of this county to the commissioners of appeal under the Property-tax, is transmitted with this report, which may be used in the next Number of your Magazine.—31. *July.*

Unto the Honourable, the Commissioners of Appeal for the County of Dumbarton, under the Property-Tax Act,

The PETITION and MEMORIAL of the COMMITTEE appointed by a General Meeting of Farmers in said County, to act on their behalf respecting the said Tax.

Humbly Showeth,—THAT the petitioners understand the commissioners have adopted it as a general rule, in assessing the property-tax within this county, for each of the two years preceding 5th April 1808, to charge the tenant, in all cases where his lease has endured more than seven years, with ten per cent. on the valuation of his farm, under schedule A, and also with five per cent. under schedule B on the said valuation, over and above the former. For instance, supposing a tenant has a lease of a farm at 200*l.* of yearly rent, which lease has endured above seven years, and that his farm is valued at 400*l.* yearly, such tenant is charged, first with 40*l.*, being ten *per cent.* on the valuation under schedule A, and also with 20*l.*, being five *per cent.* thereon, under schedule B. No doubt, he retains

20*l.*

20*l.* off the landlord; but still 40*l.* falls upon himself—a sum just double in amount of what falls upon the landlord for that farm.

The petitioners consider this as taxing the tenant twice in respect of the same property, and as not warranted by the act; for by it, as it now stands, no tenant can be charged under schedule A with more than he is entitled to retain out of the landlord's rent; the duty specified in schedule B being the only one laid upon occupiers on their own account, except in the case of a man occupying his own land. Of this opinion they are the more convinced, the longer they consider the act; and they beg leave to state, in this petition, the reasons by which it is supported.

The property-tax act, now in force, 46. Geo. III. cap. 65, begins by reciting the duties leviable under the former act, under different schedules, marked A, B, C, &c.; which former act is in this particular taken as the basis of the present one, the alteration in the amount of duty being regulated by a subsequent clause. These schedules point out the different classes of persons liable to the several duties, and the circumstances in respect of which they are declared to be liable; and therefore, as being the enacting clauses of the act in this particular, deserve the most serious attention. They are as follows.

Schedule A.—For all lands, tenements, hereditaments or heritages, there shall be charged, throughout great Britain, *in respect of the property thereof*, for every twenty shillings of the annual value thereof, the sum of one shilling.

Schedule B, *as applicable to Scotland.*—For all dwellinghouses, lands, tenements or heritages in Scotland, there shall be charged, in respect of the occupation thereof, for every twenty shillings of the annual value thereof, the sum of sixpence.

The other schedules need not be noticed, as they do not respect lands or tenements.

These schedules A and B are therefore the bases, in terms of which the duties are to be laid on. They are the enacting clauses of the act, so far as they go; for the first section, which immediately follows the enumeration of these schedules, fixes the amount of duty to be assessed, and expressly refers to them, without alteration or remark, as pointing out the circumstances in respect of which these several duties are to be assessed. It is needless to quote this long clause here; but, on perusing it, the reference to the schedules, as mentioned above, will be seen at once. The petitioners are therefore entitled to assume, that the schedules A and B, being thus referred to, make part of the enacting clause which lays on the duties in the said act; and therefore they must be resorted to, as affording the only means of solving the present question.

The slightest perusal of these schedules is sufficient to show the views of the Legislature in passing this act. Schedule A expressly states, that the duties to be assessed under it, on lands, &c., are to be charged *in respect of the property thereof*; and schedule B states as distinctly, that

that the duties under it are to be charged *in respect of the occupation thereof.* The queſtion then is, what is the meaning of theſe two words, property and occupation, as here uſed? And, on this part of the ſubject, it muſt be remarked, that theſe two words are not to be taken in their moſt extenſive ſenſe, as uſed in common colloquial diſcourſe; but, as appearing in a moſt important law, muſt be taken in their ſtrict and legal meaning, as applied to heritable ſubjects. Thus reſtricted, the word property obviouſly marks what is known in law as the *dominium utile*, or fee of heritages, in expreſs contradiſtinction to poſſeſſion or occupation; which word occupation reſtricted as above, means the perſonal or natural poſſeſſion, in expreſs contradiſtinction to the property of ſuch ſubjects. Theſe explanations being undeniable, and the two ſchedules being ſo diſtinctly marked and ſeparated from each other, the one ſet of duties being impoſed in reſpect of the property only, and the other in reſpect of the occupation only, it ſeems impoſſible, without the greateſt outrage on the meaning of words, to intermix them together; for it is clear, that no proprietor, who does not alſo poſſeſs his own property, is chargeable with any duty under ſchedule B; and it is equally clear, that no occupier, who is not at ſame time proprietor of the ſubjects occupied, can, by any twiſting of language, be juſtly charged on his own account, with any duty under ſchedule A.

Such, then, being the obvious meaning of the enacting clauſes of the act, the petitioners conſider their caſe as fully made out; and it is to them matter of wonder, how any doubt ſhould exiſt on a point ſo clear. They underſtand that a treatiſe has been written explanatory of the act, by certain law officers of the Crown, in which a contrary doctrine is maintained, founded on ſome obſcure and doubtful inferences drawn from ſubſequent parts of the act. But ſurely it will not be held, that any ſuch inferences can be ſet up in oppoſition to the enacting clauſes of the act. Beſides, the ſpeculative opinion of one or more of the law officers of the Crown, is not to be taken as the law of the country. The acts of Parliament themſelves, and theſe alone, are to be reſorted to as the only authorities for taxing the ſubject; and inferences, founded on doubtful expreſſions, ſhould in every caſe be received with caution. Many examples might be given of the danger of an oppoſite practice; but one only need be mentioned. From the variety and voluminous nature of acts of Parliament as now framed, it is impoſſible for the members to ſtudy cloſely every clauſe in every act. This is more than human ſtrength or induſtry could accompliſh. Their principal attention muſt therefore be directed to the enacting clauſes; and the ſubſequent parts being ſuppoſed to be in conformity with, and ſubordinate to them, muſt of courſe be paſſed over with ſlighter attention. The enacting clauſe muſt therefore be held, in every caſe, as the body of the law; and if, in any caſe, conſtructive inferences, drawn from ſubſequent clauſes are adopted, in direct oppoſition to the enacting clauſe, on the ſuggeſtion of the law officers of the Crown, then, it is evident, that the conſent of Parliament is degraded into mere empty form and ceremony; and that the Crown officers are the real legiſlators. In this point of view,

view, therefore, the preſent queſtion, beſides its importance to the petitioners as individuals, involves in it the more momentous one of the liberties of the country.

As the view taken of the act in the ſaid publication, either has been, or is likely to be adopted, the petitioners muſt crave the indulgence of examining the grounds on which it reſts; and they have not the leaſt doubt of being able to prove, that the ſubſequent clauſes of the act, which are held forth as deciding the caſe, do not prove any thing againſt the petitioners' plea, but are conſiſtent with it in every reſpect; and being ſo, are alſo conſiſtent with ſchedules A and B,—with the whole ſcope and ſpirit of the act, as well as with the common ſenſe and juſtice of the caſe.

Before entering upon the conſideration of theſe clauſes, it will be proper to mention what they muſt prove, in order to ſupport the opinion which is attempted to be founded on them. To ſupport this, they muſt be ſufficiently ſtrong to ſet aſide and alter the enacting clauſes of the act, as contained in ſchedules A and B; and to ſhow, that the word proprietor can be made to mean occupier, and *vice versa*; or, in other words, that property and occupancy are the ſame thing. Now, although the petitioners think that nothing can ſet aſide the enacting clauſes, and twiſt the meaning of plain words in this manner, yet, ſuppoſing for argument's ſake, that any inference or conſtruction could in ſuch a caſe deſerve attention, it will be admitted, that ſuch inferences ſhould be numerous and weighty; and that the words from which they are drawn, muſt not only expreſs clearly the meaning attached to them, but muſt be quite incapable of being explained, in conformity with the enacting clauſes. For, if they can be reaſonably explained in conformity with theſe, it is ſurely contrary to every rule of ſound logic, to adopt any explanation that ſets them at variance. The ſequel will ſhow whether theſe clauſes are of this deſcription or not.

The firſt part of the act that is capable of any conſtruction inconſiſtent with the enacting clauſes of ſchedules A and B, is the general rule No. 1. for eſtimating the annual value of all lands, &c., and which happens to be claſſed under ſchedule A. It is as follows. 'The annual value of lands, tenements, hereditaments or heritages, charged under ſchedule A, ſhall be underſtood to be the rent by the year, at which the ſame are let at rack-rent, if the amount of ſuch rent ſhall have been fixed by agreement, commencing within the period of ſeven years preceding the 5th day of April next, before the time of making the aſſeſſment; but if the ſame are not ſo let at rack-rent, then at the rack-rent at which the ſame are worth to be let by the year; which rule ſhall be conſtrued to extend to all lands, tenements, hereditaments or heritages, capable of actual occupation, of whatever nature, or for whatever purpoſe occupied or enjoyed, and of whatever value, except the properties mentioned in No. 2. and No. 3. of this ſchedule.'

Now, the argument founded on this general rule, is this. The rule, it is ſaid, refers ſolely and excluſively to the duties under ſchedule A; and is therefore nonſenſe, unleſs it is underſtood to bear, that the tenant,

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in certain cafes, is to be charged with duty under ſchedule A, to a greater amount than the ſum he is entitled to ſtop off his rent. But it will be remarked, that if the ſenſe of the rule is ſaved by this explanation, it only changes the place of the difficulty, and does not remove it; for this explanation makes the enacting clauſe of ſchedule A nonſenſe. And this dilemma cannot be avoided, if ſuch explanation is adopted.

The petitioners flatter themſelves, that they can ſolve the difficulty by an explanation more natural in itſelf, and perfectly conſiſtent with the other clauſes of the act. They hold that this rule, No. 1. does not refer, and, when framed, was not meant to refer ſolely and exclusively to the duties under ſchedule A, but was meant to be framed ſo as to be capable of being applied to ſchedule B as well as ſchedule A; and accordingly, on turning to the rules under the head ſchedule B, it will be ſeen, that at the very beginning, this general rule, No. 1., is referred to, as being alſo the general rule to regulate aſſeſſments under ſchedule B. This then is the cauſe; and it is a very reaſonable and ſufficient cauſe for making the rule ſo broad as to apply to both caſes; for if it had not been ſo framed, it would have been obviouſly defective, and the reference to it from ſchedule B would have been abſurd. The rule being thus common to both, is to be applied to ſchedule A, ſo far only as it is obviouſly applicable to that ſchedule, which impoſes a duty in reſpect of the property alone; and is to be applied to ſchedule B, ſo far as it is applicable to that ſchedule, which impoſes a duty in reſpect of the occupation only: and on theſe clear grounds it follows, that no occupier, who is not alſo proprietor, can be charged with one farthing of duty under ſchedule A, except that ſum which he is entitled to ſtop off his landlord.

The wording of this general rule ſhows, that it was meant to be framed as broad and comprehenſive as poſſible; for it is not given like an enacting clauſe; it deſcends into no particulars, but announces, in the form of an abſtract propoſition, 'the annual value of certain ſubjects ſhall be underſtood to be ſo and ſo.' Being common to both, it is plain, that the general rule is ſubordinate to, and reſtricted by, the words of ſchedules A and B, which lay on the duty; and it muſt therefore be interpreted with ſtrict reference to them. It is nothing to the purpoſe, to ſay, that becauſe it happens to be placed in the act, amongſt the regulations of ſchedule A, that it muſt therefore be applied, in its whole meaning, to that ſchedule, whether ſuch application is conſiſtent with common ſenſe or not; for, being common to both, it can be applied to each, ſo far only as it is applicable, without deſtroying the enacting clauſes. Its poſition amongſt the regulations of ſchedule A is a mere accidental circumſtance, and might have happened quite otherwiſe. It was natural that the landlord's duty ſhould take precedence of the tenant's; and the one firſt taken up fell naturally to be named ſchedule A; and it was alſo natural that a rule, which was meant to be common to two ſchedules, ſhould be inſerted under the one firſt occurring, referring

ferring back to it from the second, rather than to refer to it from the first, reserving it to be inserted under the second. At the same time, this might have happened; though, if it had, it must have been held strange doctrine, to say, that therefore a landlord was to be charged, on his own account, with both duties, and the tenant for himself, over and above all. Yet this is exactly the same with what is now intended to be done; for, a tenant of another man's ground can no more be called proprietor, than a landlord who has set his land can be called an occupier. Perhaps it might have been better to have made two rules; one of them applicable to schedule A only, and inserted under it; and another applicable to schedule B, and inserted under it. But the framers of the act (for whom the petitioners are not accountable) having judged differently, and preferred one rule, it must be applied with judgment, conform to the other parts of the act, and not at random, so as to set them aside. From the similarity of the subjects described in these two schedules, it was to be expected, that several of the general regulations might apply to both; and accordingly we find, that this general rule No. 1, is not the only rule, which, though inserted only under one, is common to both schedules; for, on looking over the regulations which are classed under schedule B, section 75, No. 9 and 10, there are several rules, which are mentioned to be common to both schedules. Now, as the first rule is common to both schedules, though placed under schedule A, here are rules, which are common to both, though placed under schedule B; so that the rule, No. 1, is not a solitary instance of the kind: and these things show, that the framers of the act did not apprehend any obscurity from this intermixture of rules common to both, because they were all to be regulated and applied, in terms of the schedules A and B, as given at the commencement of the act; which are so very distinct, as to be quite incapable of misconstruction.

This, then, is the petitioners' explanation of the rule No. 1; and they think there is no comparison between it and the one proposed to be adopted. But, although the question were much more doubtful than it is, the leaning should be to the side of lenity; the more especially as the proposed rule assesses occupiers in the enormous rate of 15 *per cent.* on the surplus rent of a farm valued, besides the other duty; and as it is a point conceded by all, that the occupier's duty alone, in almost every case, exceeds the sum that 10 *per cent.* on his real property would amount to. In proof of this, the petitioners may recur to the universal opinion of the country, and particularly, to the resolutions passed at a general meeting of the landholders of this county, where this fact is distinctly stated, and where the rule of the act for ascertaining the profits of farmers, is characterized as unequal and arbitrary. If then the occupier's duty alone is too heavy, surely there is the utmost reason for caution and consideration, before a plan is adopted, by which this rule is rendered so much more severe. But in this case there is no room for doubt; for, when it is considered that the principle proposed to be adopted, sets the

different parts of the act at variance; violates the enacting clauses; reduces the supporters of it to the dilemma of pronouncing the one or the other of the jarring parts to be nonsense, and depends for its existence on the complete perversion of the plainest words; surely it cannot for one moment be put in the scale with one which reconciles the different parts of the act to each other; confirms the enacting clauses, and produces a rule so much more consonant to reason and justice.

The next clause, from which an inference is drawn unfavourable to the construction contended for by the petitioners, is to be found under schedule A, No. 4. article 9th, which 9th article begins as follows. 'The occupier or occupiers of any lands, tenements, hereditaments, or heritages, being respectively tenants of the same, and paying *the said duties*, shall deduct *so much thereof*, as in respect of the rent payable to the landlord or landlords for the time being (all sums allowed by the commissioners being first deducted) as a rate of two shillings for every twenty shillings thereof, would, by a just proportion, amount unto,' &c.

The doubtful words in this clause are, '*the said duties;*' and, on the meaning attached to them the sense of the whole clause depends. It is assumed that these words mean the duties under schedule A only; and if any authority could be shown for this assumption, the construction of them, as proposed, would bear some colour of reason. But the petitioners contend, that this arbitrary construction is not the meaning of the words quoted, but that they evidently mean the duties assessable under both schedules A and B; and that the sentence, according to this explanation, if complete, would stand thus, 'and paying the said duties assessable upon them under schedules A and B;' and this is the only construction of which the clause is susceptible, to render it conformable to the enacting clauses, and the other parts of the act. For, as the occupier is to be assessed, in the first instance, with the duty which is meant to fall ultimately on the landlord, it was absolutely necessary to empower the former to retain the just proportion from the latter; the remaining part of said duties, that is, the duties under schedule B, for which he has no retention, being intended to attach to himself, in respect of his occupation.

Another inference of the same kind, but equally untenable with the rest, is attempted to be drawn from the wording of the rules for assessing the duties under schedule B. The first of these rules, section 75, No. 7, begins as follows. 'The duties last before mentioned,' (that is, evidently, the duties under schedule B) 'shall be charged, *in addition* to the duties to be charged under schedule A,' &c. But it is plain, this clause can bear no meaning unfavourable to the doctrine maintained by the petitioners, from the use of the words *in addition;* for the occupier being chargeable, in the first instance, with the duty for the landlord, which he is empowered afterwards to retain, it was necessary to state, that the duties under schedule B, payable for himself, were to be charged upon him, in addition to the other,

other, because they are both chargeable in respect of the same subject; only, the first falls ultimately on the landlord, in respect of the property; and the other, which is assessed also on the tenant, in addition to the former, falls upon himself, in respect of the occupation. These words, *in addition*, were also necessary, in order to include the case of a landlord possessing his own ground, to show that he was to be held liable in both capacities. This point appears so clear, as to require no further illustration whatever.

The petitioners have gone over the whole act with attention, and they cannot find one other expression, which is capable of being interpreted in contradiction to the words of schedules A and B: and those above detailed are so ambiguous, that they cannot think they deserve one moment's attention. They are quite insufficient to set aside the enacting clauses of the act, or alter the meaning of the words there used; and being just as susceptible of an explanation in conformity, as in contradiction to these, there can be no hesitation, which of the two should be adopted.

Perhaps it may be objected to the plan contended for by the petitioners, that cases may occur, in which the adopting of it would not secure a fair contribution. But to this, it is answered, that very few cases of this kind can occur; though, if they should, the rule of schedule B might be abandoned altogether, and such tenant might be assessed under schedule D, by which he could be charged with the full rate of ten *per cent.* on all the profits he actually gains.

May it therefore please the Honourable Commissioners to assess the occupiers of land, under schedule A, to the extent of the sum which they are entitled to retain out of the rent only: and to assess them on their own account with the duties in schedule B only; except in those cases, where it may be thought expedient to charge them under schedule D, on their professional profits.

Letter from Inverness-shire, 31st July.

'After the first week of May the weather was favourable to vegetation; but on the 28th of that month we had heavy rains, and the 31st severe frost, which completely stopped the growth of every thing, except crops in very favourable and well-sheltered situations. The hay crop, which promised, before the frost, to be an excellent one, suffered severely, and turns out to be one third lighter than usually known in this district.

'Potatoes look as a decent crop, though far inferior to those of last year. Wheat appears to be something like an average; but it must be remarked, that less of this grain was sown than customary. Oats are excellent; and barley, where justice was done to the culture, promises well. Indeed, this last grain is the only one that common farmers depend upon for paying their rents; being sure of obtaining a ready market, the county not raising any thing like so much as its supply demands. Cattle have lately met with a brisk sale; and the breeders have nearly got their hands clear of the old stock at prices considerably advanced.

'The making and repairing of roads and bridges in the Highlands is going on very rapidly, and communication is now opened almost to every quarter. The traveller, who formerly, with a Highland garron and a pair of creels, could, with difficulty, make his way through the mountain districts, will shortly be enabled to pass, on all hands, with the like comfort as is experienced in the most improved parts of the island. Surely, on these accounts, the public in general, and the people of these districts in particular, are much obliged to the Legislature for the liberal aid furnished to undertakings which so much promote their comfort and convenience.

'The Caledonian Canal is likewise fast advancing, and the locks at Muirton will this season be completed, in a masterly style, that will do honour to the undertaker. A great part of the cut from the Frith to Lochness is finished; and the sea lock at Clachnahary is in a forward state. In short, this noble undertaking is going on rapidly; and promises, at a future period, to be of incalculable advantage to the people of this and other Highland districts. I should have mentioned, that the braird of turnips, in many places, was very backward this season, which called for a second sowing in several instances. A number of people suffered from sowing too early last year, the roots having rotted in winter; therefore, to avert that evil, the seed process was not so early executed. The young plants are thinned upon many farms; but nothing with certainty can as yet be stated respecting the goodness or badness of a crop which is of immense benefit to the breeders and feeders of live stock every where.'

Letter from a Gentleman in Perthshire, 31st July.

'I OBSERVED, a few days ago, a very fine looking field of wheat, a good deal affected with the *rust*; and was led from curiosity to examine several ears carefully, when my attention was soon attracted by another disease (if I may be allowed to call it so) of a still more fatal tendency. Upon dissecting the ear, I found several grains not more than half formed, and which had never been in what is generally called the state of full blossom, the anthus of the flower being still confined within the husk, and, to all appearance, unable to proceed further. On removing them, I observed the portion of the grain that *was* formed surrounded by a cluster of small worms to the number of 10, 15, and even 20, of a greenish colour, and about one twentieth of an inch in length. In some ears, I found only two or three grains in this state; in others a fourth part of the whole ear; but in every case, a number of the grains were sound and healthy. Whether or not these vermin and the rust are effects of the same cause, I cannot decide; but it would appear there is no immediate connexion between them, for I always found the former in greatest abundance when there was no appearance of the latter. In one case, I found a single worm in a *rusted* grain, about one tenth of an inch long, with a black head, the body whitish. Though much larger than any I had before seen, it evidently appeared, when viewed through a glass, to be one of the same species in a more advanced state

state of existence. I have as yet heard no complaints among farmers of these vermin; but there is reason to fear they are not limited to particular spots or situations. The field where I first observed them is exposed to the north: but I found them also in a field completely sheltered from the north, and ten miles distant from the former. In the latter, there was no appearance of rust. If the common opinion be well founded, that rust is the consequence of stormy weather, particularly wind, while the wheat is in blossom, it is evident from what has been stated, that the two diseases do not proceed from the same cause.

'The 17th of June was distinguished here by a violent gale from the north-west, which proved fatal to fruit, flowering shrubs, and the leaves of young ash trees. The wheat, where I have observed the rust prevail, was at that time in blossom; a circumstance that tends to confirm the current opinion as to the cause of that disease.

'I shall not presume to offer any further remarks on the facts I have stated, but should be happy to have the opinion of a more competent judge on the subject.'

Tweeddale Quarterly Report.

The favourable weather about the middle of May brought a flattering prospect both of grain and grass, and was embraced by many people for sowing of turnips; but that genial period was succeeded by weather decidedly hostile to culture of all kinds, several snowy nights having then occurred, with a succession of rain. Owing to these adverse circumstances, the conclusion of the turnip-seed was long delayed, and a most general failure followed; greater than was ever known since that plant was introduced: and this failure may be attributed, not only to bad weather, but also to the imperfectness of the seed, and to the ravages of the fly. One general remark, however, applies to this county, viz. that every field of turnips, whatever was the nature of the soil, sown before the first of June, has succeeded; whereas, those sown afterwards have generally failed. That esculent, in fact, is the basis of all our crops; and, without it, the husbandry of this county would make a very poor figure.

The grain crops are looking well, barley on clay and thin soils excepted; and, if good weather follow, an average crop may be expected. All grain crops, however, are a fortnight later than last year at this period. Cold weather in April and May injured clover and ryegrass, though the crop of hay is not much amiss. The greater part is in the rick, and put there in the best possible condition.

Cattle and sheep markets have in price exceeded those of last year at least 20 *per cent.* Lambs were apparently scarce, as the demand exceeded the quantity presented for sale. Query, Has the introduction of the Cheviot breed occasioned a scarcity? Whether it may or not, black-faced or forest-lambs and hogs have had a ready market, and at high prices. Wool has sold 25 *per cent.* higher than last year.

At a full meeting of the farmers of this county in April last, it was agreed to petition Parliament for an alteration of the property-

tax as it affects the occupiers of land. From good authority, it is learned, that the most obnoxious clause, the one which enacts a revaluation at the end of seven years, is to be given up; and also that such other ameliorations will be made, as will place the Scotish farmers on something like an equal footing with their brethren in the Southern part of the island.——*July* 31*st*.

Ross-shire Quarterly Report.

With the exception of two or three severe gusts of wind, we have had an exceedingly favourable season in this county. The injurious effects of the frost which took place in the end of May, appeared soon to be got the better of by a succession of moist genial weather for the first fifteen days of June. On the 16th and 17th of that month, we had two stormy days, with showers from the north-west; and from the 15th to the 20th of this month, it blew with such violence from the same point, as to wither the leaves of the potatoes and turnips, and even open the husks of some of the ears of wheat on fields most exposed. These inclement periods, however, being followed by weather quite on the other extreme, their effects soon disappeared, although there can be little doubt but crops must have been thereby diminished in weight. But taking the crop altogether, there is no cause to complain. The hay turned out a much better crop than it once promised; and having been mostly in hands during the dry blowing weather, from the 15th to the 20th current, has been almost all secured in the stack or tramp rick, in the finest order. As land possessed a sufficiency of moisture during the time of sowing turnips, they generally made a fine braird, but experienced a partial check by drought and the fly in the latter end of June. More favourable weather ensuing, those affected speedily recovered; and being now properly cleaned, we have a fair prospect of a good crop.

Corn crops on light lands were suffering by drought till within the last eight days, when we had a supply of rain, which has been of material service; and being blessed with warmth and bright sunshine, the most beneficial consequences may be expected. Wheat, barley, and oats, generally promise to be good, though not bulky; and seldom have peas and beans promised better than this season. Little harvest can be expected before September. Fallows have enjoyed excellent weather for working them, and are well advanced. Potatoes are considered deficient in leaf, owing, perhaps, to the severe winds; but are now growing fast, and may yet turn out a full crop. An importation of oatmeal has been found necessary; which sells, wholesale, from 32s. to 33s., and in retail, to 35s. per 9 Dutch stones.

This has been an excellent stock-farmer's year. The demand for cattle has been steady, and prices increasing. Good stock may now be reckoned at upwards of 8s. per Dutch stone, sinking the offal. Highland wedders sell at from 20s. to 24s. Coarse wool at 8s. per stone smeared, and 10s. unsmeared, being nearly double last year's prices.——31*st July*.

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Dumfriesshire Quarterly Report.

The weather for this quarter has been favourable for farm labour and vegetation, with little exception. In the last days of May and first of June, the cold rains seemed to chill the earth, and from the 15th June to the 25th of July, the extreme drought appeared to injure pastures and corns upon light gravel soils; yet, on the whole, the state and appearance of the corn crops are favourable, and promise, at least, an average return to the farmer. The potatoe crops were for some time stinted by the drought, but, owing to the late showers are now more promising. Turnips were sown in good season, and came up well, but were immediately destroyed by the fly, excepting the Swedish variety, sown within the month of May, which the fly did not affect. Common turnips also, which were sown thick, though injured and kept back by the fly, are now appearing to be a decent crop; but those sown thin were totally cut up. Some fields have been sown again, but such are seldom crops of promise. The sowing of turnip-seed particularly thick, appears to be the best preventive against the destruction by the fly; but if they come up uninjured, it will be proper to thin them early, otherwise they do not readily recover the weakness of the stem occasioned by the thick and quick growth. The permanent advantages of a well managed turnip crop cannot be too much impressed on farmers who have not been in the habit of raising them.

The price of wool took a favourable turn in the spring; and is now about 30 *per cent.* above the prices of last year. The wool of white-faced sheep, commonly of late years called Cheviot, is sold from 28 to 36s. the stone of 24 lib. avoirdupois. Blackfaced, or short sheep wool, from 9 to 10s. It might not be prudent for farmers, or even landlords, to wish for still higher prices, without an assurance or prospect of its continuing. As the price of stock of all kinds almost always follows that of wool, an immediate rise of the rent of farms out of lease takes place; and if the increased price of wool has not been well founded, loss, and inability to pay rents is the consequence. The farmer suffers the first loss; but the landlord does so more permanently, as his establishments, proportioned to his high rent-roll, are not brought back again with facility, or without regret.

Whitefaced lambs have sold from 10 to 13s. Short, or moorland lambs, from 8 to 10s, the best kinds. Cattle are at high rates. Milk cows in May and June from 15 to 20*l.* Year old stots from 4 to 6*l.* Two years old from 6 to 9*l.* The late unfavourable news from the Continent have damped the spirit, or rage, for buying.—— *August* 1.

Berwickshire Quarterly Report.

In the first week of June we had a storm at N. accompanied with snow, which covered the hills white for three nights in succession, and gave a severe shock to the vigorous vegetation which the warmth of May had called forth. Since that time the weather has been

moderate; but, from the frequent recurrence of northerly winds, the average temperature has been a good deal lower than that of June and July 1808.

The wetness in the beginning of June, while it retarded turnip work, made the heavy loams so waxy, that they did not work freely afterwards, and on these soils the young plants remained long stationary: indeed the crop in general made but little progress till towards the end of July; it is now, however, mostly thinned out, and in some cases, the second hoeing has commenced. Early sown fields were greatly annoyed by the fly, whose depredations continued, even after the plants were far advanced in the rough leaf, which has occasioned blanks, both amongst the rutabagas, and early sown turnip; and, in some instances, it became necessary to sow a second time. Several fields also missed in such a way, as to give reason to suspect the quality of the seed: but the loss in this county has been small, when compared with that in Roxburghshire, where the failure attributed to this cause, is said to be little short of two thousand acres.

The wheats are at present healthy and vigorous, but the autumn sown fields are in many cases thin. Barley is generally good; and oats promise to be a full crop, particularly upon loamy soils after lea. Peas and beans are both luxuriant, but they were late in showing the bloom. Upon the whole, we have seldom seen the grain crops wear a more promising aspect, though much still depends on the complexion which the weather shall assume before harvest, particularly as appearances rather seem to indicate that it may be a late one.

The weather proved extremely favourable for hay-making, till the beginning of last week, since which it has been much interrupted by thunder-showers; the crop in general will not prove weighty, having, in many cases, been pastured in the spring.

Potatoes are a thriving crop, and almost entirely free of the curl. Pastures have been good, and lean stock has all along found a ready market, at prices considerably above the rates of last year; fat has also had a current demand. Beef at 7s. 6d. to 8s. 6d. per stone sink; and mutton at 8d. to 9d. per lib. avoirdupois.

Long wool has been selling, readily, at 1s. per lib. avoirdupois; and at St Boswell's fair, lambs sold from 25 to 30 *per cent.* above the rates of last year.

Corn markets have been advancing of late. At Berwick, July 29th, wheat sold from 60s. to 75s.; Barley from 33s. to 35s.; oats from 24s. to 29s.; and beans from 42s. to 44s. per boll of six Winchester bushels.—*August* 2.

Fifeshire Quarterly Report.

In this county, a continued tract of dry weather made the hay crop rather light: it may, however, be rated at near an average crop, and was generally got up in excellent order. The price is supposed to be from 9d. to 10d. per stone.

On the 26th July, and almost every day since, we have had continued rains;

rains; but partial as to extent, being fair in one part of the county, and rainy in another, alternately. The victual being moſtly in the ear, little is lodged, and no damage has enſued. Wheat is a good crop in general; no mildew has taken place, and little blacked is to be ſeen. Oats are every where good, and offer an abundant crop. Peas and beans the ſame. Barley is alſo good, eſpecially what was early ſown; but, in many fields, a moſt uncommon quantity of blacked ears have appeared, particularly in the fineſt ſoils.

Turnips came up unequally, probably owing to the dry weather at ſowing; but, ſince the rains commenced, have a vigorous appearance, eſpecially the plants that ſprung firſt; but there are many blanks. Little flax was ſown this year, as ſeed could not be procured; but what was ſown promiſes a good return. Potatoes, as yet, have but an indifferent appearance, not filling the ground well. Since the rains, however, they have mended conſiderably. Paſtures, in general, are excellent. The cattle thrive well, and have a ready demand from England. The victual markets continue ſteady, with almoſt no variation in price.

If dry warm weather ſucceed, there is reaſon to believe the harveſt will not be late. Upon the whole, the proſpect is conſoling; and it is hoped that ſcarcity is not to be dreaded.——*Aug.* 2.

Inverneſs-ſhire Quarterly Report.

The froſt was ſo ſevere on the laſt day of May and 1ſt of June, as to blacken potatoes that were above ground, and the young ſhoots of trees; and, of courſe, to do material damage to the ſeveral growing crops of grain. On the whole, we have had a favourable ſummer; a more promiſing crop of corn having been ſeldom known in this county; and if dry weather is received, the harveſt will not be late, though by no means ſo early as laſt year. Amongſt the wheats, a ſingle ſmutted ear is not to be ſeen; but many of the beſt fields are much affected by the yellow gum or ruſt; and the thin-chaffed ſort fully as much as the woolly-eared variety. The hay crop is rather light; but, in general, it is well ſecured. Many complaints of turnips not having brairded equally, prevail; and, on the whole, this plant will yield an indifferent crop; though, where early ſown, and huſbandry good, they are not much amiſs.

Black cattle and ſheep continue in great demand, and at high prices. Indeed, for a long time paſt, there has not been a more favourable year for Highland huſbandry than the preſent one. Wool has advanced from two to three ſhillings per ſtone. Beef and Mutton 6d. to 8d. per lib.; Oatmeal 32s. per boll of 9 ſtone Dutch; and there is abundance of ſupply on hand.——*Aug.* 3.

P. S.—On Friday, 4th inſtant, a dreadful thunder ſtorm, accompanied by a deluge of rain, took place in the neighbourhood of Inverneſs, and lodged all the ſtrong corns, beſides doing much other damage. At Kirkhill, ſeven miles to the weſtward of Inverneſs, a ſhower of ice fell, which lay on the ground, undiſſolved, till the forenoon of Saturday. About 40 ſheep were killed, by one ſhot of lightning, on the hill ſituated betwixt the Aird and Urquhart. Many fields of potatoes and beans are nearly deſtroyed.——*Aug.* 8.

Mid-Lothian Quarterly Report.

On the three laſt days of May and 1ſt of June, great quantities of rain

rain and ſnow fell, accompanied with froſt, which not only drenched and chilled the land, but proved highly inimical to the growth of the various crops, and to vegetation afterwards. Since the middle of June, the weather has been more favourable, both in promoting vegetation, and for ſucceſsfully conducting the operations of ſummer-fallow, and dreſſing the green crops. Haymaking has been executed almoſt without interruption, in the beſt poſſible condition.

From theſe circumſtances, the crops, which had ſuffered much by the ſeverity of the cold and exceſs of moiſture early in June, have greatly recovered, and have regained a promiſing appearance. Indeed, the blight or yellow ruſt is apparent in many fields of wheat; but this is partial, and only affects thoſe fields which happened to be in bloom when two boiſterous days occurred about a fortnight ſince. Should dry, genial weather prevail through the preſent month, a full average crop may be looked for.

Oats and barley may likewiſe be rated at an average crop, with the exception of thoſe upon thin ſoils and an impervious bottom. Beans and peas ſeem to go too much to ſtraw. Potatoes are more various. Such as grow upon deep dry loams look fine; while thoſe upon heavy damp ſoils are indifferent.

Hay is well got, and of fine quality. Perhaps it would be adviſable that every farmer ſhould ſet aſide a portion of it for his own horſes, now when dung has got to ſo great a price at the metropolis; while thoſe at a diſtance ought never to part with any of it, unleſs it can otherwiſe be replaced in manure. The demand to England for cattle ſtill continues briſk; conſequently, high prices are maintained.——*Aug.* 3.

Letter from Falkirk, Aug. 4.

'In the weather, ſince laſt report, has not been invariably ſuch as the farmer could have wiſhed, it has not, upon the whole, been unfavourable to the varied purpoſes of agriculture. Drought has been at times exceſſive, but never long continued, without the intervention of moderate rains; and theſe have not hitherto gone the length of lodging the crops to any extent; which has been the caſe before this period of the ſeaſon, for ſome years paſt; and, particularly laſt year. The greateſt want, hitherto, has been a due degree of heat, which threatens to throw general harveſt late,—a circumſtance always to be dreaded in our northern climate. We ſhall probably have partial harveſt in two or three weeks, but not likely to become general before the end of the month, or beginning of September. Nothing could have exceeded the admirable weather of hay-harveſt. From the time the ſcythe entered to work, until the hay was either in the ſtack or ſecured in the tramp-rick, not a ſhower of any conſequence. It is therefore got up in the higheſt poſſible ſtate of perfection, and turns out, although by no means a weighty crop, yet conſiderably better than was expected ſome time ago. It mended greatly during the laſt two or three weeks previous to cutting. The price ſtarted at 1s. a ſtone, but has ſince rather fallen: the buyers ſeem now to make a ſtand at 10d., although the ſellers do not readily accede to that price.

'Our

'Our grain crops may be reported fully equal to an average, except wheat, which, as ſtated in laſt report, is pretty generally thin on the ground, and will be therefore deficient in bulk: probably, however, from not having yet been lodged, it will turn out of better quality than laſt year. Early ſown barley will be a tolerable crop; what was late is far leſs promiſing. Oats are almoſt every where a fair crop, and, in many ſituations, excellent. This is ſaid to be alſo the caſe in the moorlands, where they conſtitute the principal article of produce. Beans are, upon the whole, probably the beſt crop in the Carſe, and promiſe a better return than for ſome years paſt. Paſtures have carried through a larger ſtock than uſual; are ſtill excellent; and, with the moiſture lately received, are likely to continue to afford a full bite. The ſeaſon has afforded every facility for the important proceſs of ſummer-fallowing, which is therefore in an advanced ſtate, and generally in good order. Our grain-market has not ſuffered the fall pretty generally looked for at the time of laſt report, in conſequence of the then ſituation of affairs with America. On the contrary, in the face of a pretty conſiderable importation from that country, and on the very verge of harveſt, with an appearance of ſteady weather, the price of wheat has been gradually creeping up, which would have been leſs ſurpriſing had it occurred three months ago: but on no ſubject are we apt to form more erroneous opinions than on this; it ſeems often to ſet every rational conjecture at defiance. Our preſent price is much the ſame with that of Haddington, that is to ſay, our average price; for our top prices never reach ſo high as in that market. In the courſe of the quarter, the butcher market has riſen a little, but leſs than the price of cattle would ſeem to warrant.'

Forfarshire Quarterly Report.

THE weather, during the preceding quarter, has been more favourable for the growth of plants, than for cleaning the ground. The firſt two weeks of June were wet, and the ſowing of turnips much impeded and unſatisfactorily executed. The remainder of the month was dry; and, conſequently, a greater part of the turnip crop was later ſown than in ordinary years. Many fields were ſown a ſecond time, and the braird of them now appears cloſe. On the whole, the turnip crop has a leſs promiſing aſpect than for ſeveral years paſt, the early ſown being thin planted and unequal in growth. The moſt of July has been warm ſhowery weather, and the crop has improved conſiderably in bulk; but the wet weather is now continuing ſeriouſly long; and the bad effects of it laſt year are ſomewhat dreaded on the wheat crop. A yellow ruſt has appeared pretty generally on the ear; but little of the crop is yet lodged. A tract of dry, clear weather is moſt anxiouſly looked for. The harveſt, at all events, will certainly be late; and little grain will be cut down before the firſt week of September.

Notwithſtanding the uncommon high rents given for graſs parks, this will be a good year for the grazier. Every market, for two or three months back, has been better than the preceding one; and cattle of every deſcription are as high in price as at any former period. Their value is not likely to fall for a few years yet, if it may be inferred from the

the ſcarcity of ſtock in the country. Sheep and horſes have alſo had a briſk ſale.

The hay crop is moſtly yet in the fields: the price for new hay is about 10d. or 11d. per ſtone. The high price and good demand for every article of farm produce is ſtill increaſing the rent of land. A farm of good ground, at an ordinary diſtance from markets, cannot be got under 4l. or 5l. an acre.

Grain markets have been rather riſing of late. Good wheat brings upwards of 50s. per boll; other grains are moſtly out of the farmers' hands; but no apprehenſion of ſcarcity till this crop is got in.—*Aug.* 5.

Letter from Glaſgow, Auguſt 5.

'THOUGH the months of June and July were not diſtinguiſhed for that genial warmth uſually attendant on ſummer, yet the weather has been ſufficiently good, upon the whole, to advance the growing crops, in their way to maturity, to a ſtate not far ſhort of any former ſeaſon. If the weather, which has been ſoft during the laſt eight days, clear up, and continue fair and warm, we are of opinion the harveſt will not be above a fortnight later than laſt year.

'Wheats, which at one time had a thin and rather indifferent appearance, were wonderfully improved by the refreſhing ſhowers of the month of July; and promiſe, if not an abundant, at leaſt an average crop. Oats are every where luxuriant; ſo are beans and peas; and both promiſe well.

'Potatoes look well on potato ground; but, on other lands, they preſent an indifferent and ſickly aſpect. It is dreaded that they will be deficient in quantity. Hay, though a light crop, is of excellent quality, and was all ſecured in the beſt condition.

'The importations of wheat and flour into the Clyde from America, have not, as yet, been equal to our expectations; and though large quantities of both, particularly of the latter, have arrived thence at Liverpool, and conſiderable purchaſes been made there on Glaſgow account; not more, direct and circuitous, have yet reached our market, than about 8000 barrels flour, and 1300 quarters of wheat. This inconſiderable ſupply, with the uſual quantity from the north and eaſt of Scotland, (the ſtock of old wheat being much reduced), was inſufficient to prevent fluctuation in the price of this grain. It has for ſome time, therefore, been inclining upwards; and this riſing propenſity received a freſh ſpur on Wedneſday, by the arrival of papers from America, announcing the proceedings in Congreſs with regard to the Non-intercourſe act. It is not for us to enter into a diſcuſſion of this ſubject. There are various opinions reſpecting it; but it is our firm perſuaſion, that nothing ſhort of the moſt urgent neceſſity will induce the Americans again to recur to that ſyſtem of ſelf-denial, which has already proved, and muſt ever prove, ſo ruinous to their intereſts.

'The importations from Ireland, ſince our laſt letter, have amounted to 50,000 bolls oats, and 8000 bolls of oatmeal. This conſiderable influx has been the means of preſerving a ſteadineſs in the market; and as more arrivals are ſtill expected, it is probable the price will experience little variation for ſome time. We ſubjoin the prices current.

'State

'State of Glasgow Markets, Saturday, 5th August.

Scotch Wheat -	46s. — 50s.	p. boll Linlithgowshire measure.
American do. -	44s. — 51s.	ditto of 240 lib.
Irish do. -	45s. — 47s.	
Irish Mealing Oats	27s. — 28s.	ditto of 264 lib.
Scotch Potatoe do.	26s. — 28s.	ditto Renfrewshire measure.
Ditto Small do.	23s. — 24s.	
English Beans	31s. — 34s.	ditto ditto ditto.
Scotch do.	30s. — 32s.	
Scotch Oatmeal	25s. — 29s.	ditto of 140 lib.
Irish do.	24s. — 25s.	
Fine Flour	76s. — 78s.	p. sack of 280 lib.
Amer. superfine do	50s. — 52s.	p. barrel.

East Lothian Quarterly Report.

THE month of May concluded in an unfavourable manner, and June opened with froft and fnow;—a circumftance not hitherto recognized in the agricultural annals of this county. Winter wheats of courfe fuffered feverely, and have not recovered from the check then fuftained. The fpring fown crops were lefs injured; and, viewing them in a general manner, may be reported, at this time, as promifing an ordinary average.

Still much depends upon the fucceeding weather; for none of the crops are out of danger, efpecially fpring fown wheats. Even winter wheats received injury from the damps and fogs which preceded the late rains, many fields being covered by oaker or gum, and feveral attacked by a worm on the ear; and, as rainy weather ftill continues, incalculable mifchief may be expected. On the whole, the grain crops are in a perilous ftate, all the ftrong fields being lodged, and few of them fo forward as to promife regular harveft before the end of the month. Oats, efpecially, are later than ufually happens.

Hay is generally ftacked in good order; but clovers, which were depaftured in the fpring with fheep or cattle, now cutting, or lately cut, are not in good condition. Turnips are not fo forward as ufual, much bad feed being fown, which will be an incalculable lofs, not only to many individuals, but ultimately to the public. The feed was evidently *of age;* therefore, in numerous inftances, brairded imperfectly. Where it did braird, the plants were fickly and debilitated; confequently, unable to bear up under the flighteft adverfe circumftance. Ruta baga and yellow turnips make a fine appearance, good feed having been procured of thefe varieties; and there are inftances of yellow turnips having been fit for fetting out eight days fooner than white ones, though fown in the fame day, and upon the fame field; entirely owing to the ftrength of the plant, produced by freth, healthy feed, which had not been kept for more than one year, or received any damage in the ftack, or previoufly in the winning procefs.

Except for wheat, the grain markets have been nearly ftationary. This article has advanced conftderably, and would have advanced a great deal more, had not foreign importations interfered. The butcher market ftill keeps up; and, from the great rife upon lean ftock, there feems little probability that a declenfion will take place through the feafon in the price of beef or mutton.

At the general seſſions of the county, it was moved, and unanimouſly reſolved, to thank the Right Honourable Lord BINNING for his able and independent conduct in Parliament, and, in particular, for the conſtant and unremitted attention ſhown by his Lordſhip to every public meaſure connected with the agricultural and commercial intereſts of the country. This meaſure has given great ſatisfaction, being decidedly due to the public conduct of the noble perſonage. At the ſheep ſhow at Scoughall, his health, with three times three, was drunk by the company there aſſembled; and this being done by an aſſemblage of agriculturiſts of the firſt reſpectability, evinced their entire approbation of his public conduct, and the gratitude felt for preſenting the petition from this county reſpecting the Property-tax, in which buſineſs his Lordſhip acted in the moſt polite and handſome manner.——*Aug.* 7.

P. S.—Since the above was written, the corn crops have been much injured by a continuance of unfavourable weather; and it is now diſcovered, that many fields of winter wheat are blaſted, therefore colouring prematurely. On the night of Thurſday, 10th inſtant, a ſevere thunder ſtorm occurred, accompanied with heavy rain; and as weather of the like nature ſtill continues, conſiderable damage muſt neceſſarily be ſuſtained by every farmer whoſe crops are above mediocrity. Wet weather during the proceſſes of filling and ripening, is rarely miſſed in this county. In fact, ſuch weather is the greateſt evil which can befal the huſbandry of a corn diſtrict, and, in its conſequences, generally operates againſt the farmer in direct proportion to the goodneſs of the ſoil which he poſſeſſes, and to the richneſs of the crops thereupon produced. The harveſt, at all events muſt now be late. Some fields of barley promiſe to be ready for the ſickle in eight days or ſo; but general harveſt cannot be expected ſooner than the firſt week of September.—14. *Auguſt.*

ENGLAND.

Northumberland Quarterly Report.

THE fine weather, during the greateſt part of May, terminated on the 26th, and was ſucceeded by cold and rains until the middle of June; by which many ſoils were ſo drenched with wet, as to prevent ploughing for eight or ten days. The remainder of June was fair and fine. The firſt ten days of July were wet and cold. From that period to the preſent, the weather has been warm, dry, and very favourable to the hay harveſt.

The fallows for turnips upon ſtrong loams, that were rendered ſo cloddy by the dry weather in May, got into the oppoſite extreme by the great falls of rain, and made unfit for ſowing turnips upon them; but, to the dry light loams, this wet was of the greateſt advantage, the young plants being up in a few days after the ſeed was depoſited; but diſappeared again almoſt as readily, being eaten off by the fly; which occaſioned a great many fields to be ſown twice, and ſome have been ſown three times. This inſect was ſcarcely known here formerly. Of late years, it has increaſed very much, eſpecially in the three laſt; but the ravages of this year are by far the moſt extenſive. From the circumſtance of a ſecond ſowing, turnips are very late, and at preſent in a moſt unpromiſing ſtate.

The corn crops upon clay ſoils and moiſt loams are thin, both in this county and the county of Durham. Upon dry ſoils the crop is luxuriant, not only of wheat after turnips, but of every other ſpecies of grain.

Whether it may be productive, depends on the weather for the two or three enſuing weeks. The harveſt will be late.

Of new graſs the hay crops are very light, the red clover being much deſtroyed by the ſeverity of the winter. In moſt places there is not one third of the clover there ſhould have been; and, upon thin, wet ſoils, it is totally deſtroyed. Upon dry old meadows, the hay crop is great.

Our corn markets are advancing, eſpecially for wheat of good quality, of which there is little in the farmers' hands. What is now to bring to market is moſtly of very inferior quality, and much of it that will yield only a ſcanty portion of flour.

The markets for fat ſtock have been pretty regular through the quarter, and prices good. Beef from 7s. to 8s. per ſtone of 14 lib. ſink; and mutton 8s. 6d. to 9s. The demand for wool is greater than laſt year, and prices higher. The average price for long wool is 1s. per lib., and for Cheviot 1s. 8d. per lib. At Yetholm fair, long-woolled lambs ſold from 16s. to 22s. per head, and Cheviot from 10s. to 14s.——27. *July.*

Suſſex Quarterly Report.

In the beginning of June there was a continuation of fine rains, which were of great ſervice to every kind of produce; and to these rains ſucceeded about three weeks of remarkably fine weather, which permitted the whole of the artificial graſſes to be got up in capital order; but the rain that fell was extremely prejudicial to the meadow graſs, which, to a very great extent, was expoſed to repeated waſhings, and of courſe much injured; but fine weather again ſucceeding, gave an opportunity of thoroughly drying it, and of finiſhing the hay harveſt in a very favourable manner. Both natural and artificial graſſes may be eſtimated at an average produce. The injury, however, ſuſtained by the hay has been amply recompenſed by the benefit the turnips derived, and, indeed, every ſpecies of corn. Oats would have been a very deficient crop but for the very ſeaſonable rains, though they muſt ſtill prove under an average produce. The barley and peas are very promiſing; the latter unuſually good, upon all varieties of ſoils. The wheats are much improved within the laſt ſix weeks, and will admit the ſickle in a few days: they will certainly not reach an average crop: the deficiency may be eſtimated at leaſt at one fifth: I am afraid it will prove greater, as they are generally thin on the ground, even on the good land near the ſea-coaſt: they are beſt on the ſtrongeſt and heaviest ſoils. Hitherto there has been no appearance of blight; and if any reliance is to be placed upon the old obſervation, of its yielding well from the number of black ears, the wheat crop may prove better than at preſent expected. Beaſts, ſheep, and lambs, are much in demand, and of courſe fetch high prices. Cart horſes uncommonly high. Oxen appear coming more into faſhion. South Down wool has been very eagerly purchaſed, at 2s. 6d. per lib. the inferior ſorts; the better kinds fetch 3s.; and 5*l.* per tod of 32 lib. is expected.——30*th July.*

Letter from a Farmer in Wales, 30th July.

'The hay harveſt has been remarkably good; and little of that article remains in the field. A tract of cold wet weather, in the end of

May and beginning of June, threatened to ruin the wheat crop; but the warmth of the current month has recovered it conſiderably, the ſtraw being clear in the reed, and the ears well filled. If good weather continue, harveſt will be general next week through the vale of Glamorgan. Oats will be of little bulk, being ſhort in ſtraw, though full of corn. The potato-oat is now generally ſown here; and a much greater breadth of ground is under that grain than uſual, there being no market for barley. Peas and vetches, in general, are fair crops; but beans having failed in the two laſt years, are given up; and, to my knowledge, there is not one field of them in the diſtrict. Turnips, in many places, look well; though many fields were taken off by the fly, which is very prevalent, about the middle of the ſeaſon; ſo that thoſe firſt and laſt ſown promiſe to be beſt. Potatoes will not be a great crop, as the weather has lately been too dry for them. As for fruit, there is a general complaint of the orchards having failed, owing to the cold damp weather in April and May.

'Corn markets remain nearly ſtationary. When the American importations were made, our millers ſtopped buying, and wheat lowered in price for a fortnight or ſo; but it has now got up to the old rate, and threatens to advance higher, as we have very little ſtock in hand. Cattle, both fat and lean, keep their price, and ſo do ſheep. Lambs that ſold laſt year at 16s., have been ſold at 20s. and 21s. Store pigs are ſcarce and dear. Wool has varied much in price, owing to the great quantity lately puſhed into the market; there being, for ſimilar qualities, given from 25s. to 42s. per ſtone of 21 lib., on different days.

'I have ſeen but two fields of wheat touched with blight this year; one of them a pretty full crop, and the other indifferent. Upon examining them, I obſerved a barberry tree in the hedge oppoſite to one of the fields; and it was remarked to me, that the part of the field oppoſite the tree had not eſcaped blight during the four paſt crops of that grain which had been raiſed upon it. In the other field, the occupier mentioned that his predeceſſor had left off ſowing wheat upon it, though the beſt ſoil in the farm, merely becauſe that the grain was always blighted. We went to examine the field, and found a barberry tree in the hedge, around which, for many yards, the wheat was as if it had had been burnt up. Indeed, the whole field was affected in ſome degree; but the farther from the barberry, the leſs injury appeared. There are ſeveral other fields in this neighbourhood affected ſomething in the ſame way, all of them near farm-houſes, where a tree of that ſort is generally planted, as the inner bark is ſaid to be a certain cure for the yellow jaundice, the tree being called in Welſh, the *prin clevot millin*, which means, the yellow diſeaſe tree.'

Yorkshire Quarterly Report.

THE crops of this country are at preſent likely to be equal to a fair average. Wheat in general looks uncommonly well; though, of late, ſome ſymptoms of mildew have appeared in the lower parts of the county. Barley is good on well managed land. Oats are much as uſual. Beans and peas ſhow a capital appearance; but, unluckily, that ravenous inſect, commonly called in the ſouthern counties the *Collier*, has commenced his deſtructive operations in ſeveral places.

The ſummer and turnip fallows have been carried on without material hinderance. Turnips are doing tolerably well, notwithſtanding the drought of the laſt two or three weeks. Here and there patches of drilled Swediſh and common ſorts have begun to make their appearance; the ſucceſs of which, it is to be hoped, may contribute to the further extenſion of that ſyſtem of management—a ſyſtem fraught with many advantages both to the cultivator and to the intereſts of agriculture.

Hay and clover do not afford ſo abundant crops as laſt year; but the paſtures are uncommonly good and nutritive. From every appearance, cattle and ſheep are not likely to be cheap, as the ſecond crop of clover, from the fine ſhowers lately received, is likely to exceed the firſt. Wool ſells well. Fine ſorts ſo high, as to bring that bad breed, the ſheep of Spain, into faſhion; but honeſt John Bull will ſoon find to his coſt, that fine lady's cloth is but a ſorry exchange for good fat mutton.—*Aug.* 1.

Norfolk Quarterly Report.

The continued dry weather throughout the month of May and part of June, ſhortened the hay crop on all ſoils. Nor was the ſeaſon for getting it ſo favourable as that of laſt year; ſtill, this year's produce is not conſidered to be any thing ſhort of a fair average. Fine ſeaſonable rains coming in the end of June, and continuing the greater part of July, has made the after feed (or eddiſhes) ſo abundant, that the proſpect of autumn food for ſtock has ſeldom been exceeded. The ſeaſon for ſowing turnips has alſo been remarkably fine; there appears to be a general good plant; and never was there leſs complaint of the fly, which, in many ſeaſons, proved ſuch a deſtructive enemy to that very valuable root, when in its infant ſtate. Planting potatoes in this county increaſes yearly, this root proving to be of great utility both to men and cattle. From the preſent favourable appearance of the two laſt mentioned crops, as well as that of hay-ſtacks, a plentiful ſupply of winter food, for ſtock of every deſcription, may be expected. The crop of lambs of this, far exceeds that of laſt year in increaſe; ſtill prices ſeem to advance, as thoſe of the Southdown breed already brought to market have obtained from 18l. to 24l. per ſcore. For wool great prices are given. Flocks of fine quality ſell for 84s. per todd of 28 lib.; while the mixed Norfolk and Leiceſter fleeces will not fetch more than half that ſum. Harveſt is faſt approaching. There are a few inſtances of wheat, peas, and oats being cut; but we cannot expect a general harveſt in leſs than a fortnight. The wheat crop is partially good. On a general ſcale, it is conſidered much lighter than laſt year. Fortunately the mildew has not affected it much; the ears are well filled; the kernel full and plump; and, from the preſent appearance, a finer quality may be expected. Barleys ſeem generally good, ſuperior in look to thoſe of late years. Peas promiſe well, though the breadth of the crop is leſs than uſual. The breadth of oats is not extenſive, owing to the inundated ſtate of the fens; and the crops of this grain are conſidered much inferior to thoſe of laſt year. Beans are looking well; they are quite free from the inſect; and promiſe to be very productive.—*Aug.* 1.

Letter from London, 2d August.

'Since laſt report, the agricultural appearances of the country, in the vicinity of this metropolis, have undergone various changes, and,

upon the whole, they cannot be conſidered ſo favourable at this moment, as held forth by the ſeaſonable fine ſeed time experienced for almoſt all deſcriptions of grain. After the heavy rains and conſequent floods in the months of March and April, a conſiderable drought prevailed, to the manifeſt injury of all ſpring crops, which, though relieved by ſeaſonable ſhowers in the latter end of June and early in July, are, on the whole, not ſo luxuriant as at this time laſt year.

'The plant of wheat is generally acknowledged to be thin on the ground, and ſhort in the ear, but promiſes an exceeding fine ſample, except in the ſtrong clay lands in Eſſex and Kent, where the crop is the heavieſt, and where blight and red gum have appeared. The harveſt of this grain has commenced under very auſpicious circumſtances; and, ſhould the weather be favourable, a great deal will be houſed in a fortnight or three weeks. In general, it is anticipated that this crop will not exceed an average, and may even fall ſhort of the produce of laſt year. In the counties of Norfolk and Suffolk, the growth of barley is abundant and healthy; though, on light and gravelly ſoils, it has never recovered from the effects of the drought; and, under the impreſſion of grain diſtillation not being permitted, a leſs breadth than uſual was ſown with this grain. The inundation of part of the Fens in Lincolnſhire and the Bedford level, at the time that oats ſhould have been put in, cauſed a great delay in aſcertaining the extent of the growth of that grain; but it now appears that there are fully more acres than uſual under this deſcription of corn, and that the crop is generally good.

'The ſupplies of all deſcriptions of grain have been abundant. A very large proportion of wheat and oats coming from the Continent, has kept the prices down, and almoſt ſuſpended the accuſtomed coaſting arrivals, which have been unuſually ſmall; and, in conſequence thereof, it will be found that a conſiderable ſtock of oats remains in the hands of the merchants at the outports, and of wheat alſo, the extent of which may be conſidered as large at leaſt as is uſual. The renewal of friendly intercourſe with America, has furniſhed us with ſome quantities of flour and wheat; but the weight of arrivals from that quarter has been at Liverpool, where, from the ready ſale they have experienced, it would appear they have been found extremely ſeaſonable, and the means of preventing higher prices, which would have otherwiſe occurred. Prices here have been pretty ſteady; and though, within theſe ten days, they have a little advanced, that advance may be imputed to the abſence of ſupplies from the embargo on our own ports, and the neceſſities of our millers, whoſe ſtocks are acknowledged to be ſhort. Our armament, lately ſailed, will probably, from its ſuppoſed deſtination, conſiderably interfere with the ſources of Continental ſupply. Below are the prices at the corn exchange here.——31. *July.*

'State of London Markets, 31ſt July.

Wheat, Engliſh, White	- -	94s. 98s. 108s. per quarter.
——— Do. Red	- -	84s. 88s. 91s.
——— Dantzig	- -	95s. 97s.
Barley, Norfolk and Suffolk	-	40s. 42s.
——— North Country	- -	30s. 32s.
Malt, Norfolk and Suffolk	-	75s. 77s. 80s.

Beans, Small	56s. 59s.
Ticks, and Large	46s. 49s.
Oats, Potatoe	37s. 39s.
—— Poland	34s. 37s.
—— Feed	28s. 32s.
Flour, English, per Sack	75s. 80s.
—— American, p. Barrel, of 196 lib.	48s. 53s. 54s.

Cumberland Quarterly Report.

THE appearance of the wheat crop since last report is more flattering, yet it is by no means an average one; and many individuals have to lament severe losses in consequence either of partial or total failures of this *golden* grain. Lent corn is in a state of great forwardness, and promises to be very good. Invariably, so far at least as my observations have extended, the early sown crops are best; and instances are not wanting of farmers who, on the most moderate estimate, must lose *2l. per acre* for deferring their seed time till the 22d of March. Early sown barley will be ready to reap in two weeks; some is even now ready. *Late* sown barley, on rich lands, is *lodged* by the late heavy rains; and on poor soils, the dry weather, retarding its progress, made it assume a very sickly appearance. The weather, during the hay harvest, until the 27th of July, has only been equalled by the last. Meadow hay good; and sown grasses an average crop. J. C. Curwen, Esq.'s crop of grass, on his meadow, *irrigated* two years ago, is excellent. It consists of 22 acres, scarcely worth 35s. per acre when first irrigated, and is now *cheap* at *5l.* 10s. per acre. Where clover has been sown at the rate of 14 lib. to the acre, some uncommonly luxuriant crops have been raised; and the aftermaths are not much inferior. Soiling has made a rapid progress through the whole of the county. The prejudice of *custom*, and the opposition of *ignorance*, are silenced, when the *profits* arising to our truly spirited and enlightened rural economist, J. C. Curwen, Esq., in consequence of his steady adherence to so rational a plan, are for a moment glanced at. Every agriculturist, who can contrast the present state of his farm with what it was three years ago, must be amazed at the improvements he has made. A considerable part of Moor Close farm was not worth 8s. per acre at that period, which is now bearing a crop of wheat worth, at the lowest valuation, 20*l.* per acre. All his green crops are good. His potatoes and cabbages are unequalled. His Swedish turnip excellent; and common turnip, sown on heavy soil, with only ashes and compost, must equal his highest expectations. In *two hundred and sixty* acres of wheat, 2 or 3 acres alone seem to have failed. His most determined opposers, if, as an agriculturist, he has an opposer, must be delighted to see his exertions, his unwearied diligence and attention, so amply remunerated. Envy itself must be silent, when it beholds the clearness, the luxuriance, and the admirable arrangement of his crops. It is stated with the greatest pleasure, that Sir James Graham, the proprietor of 25,000 acres of land in this county, has reset the whole, save three small farms, without SECRET proposals, or any other unman-

ly, *mean* trick, to his numerous and respectable tenantry, for a term of 14 years. I am sorry to say, his farmers have yet much to learn; and heartily wish some of the more enlightened would break the fetters of their ancestors. If such an example, united with the example and influence of our president, or any other cause, can be a means of *uniting* the affections of the landlords and tenants of this country—can induce the former to act with candour and liberality, and the latter with confidence and the spirit it uniformly inspires—then every friend to the agricultural interests of his country may exclaim, *Felices agricolæ, sua si bona norint.*——*4th August.*

Extract of a private Letter from London, 4th August.

'I was lately through some of the inland counties the length of Cheltenham, &c.; and must mention a circumstance pointed out by my son, a boy only of five years of age. 'Papa,' exclaimed he, 'did you ever see five horses and a bull in a plough before?' The fact was literally so; though, from the slow pace at which the plough moved, it appeared that the work was very hard both to men and cattle. The Vale of Evesham, or Esham, as it is called, is one of the finest agricultural objects I ever beheld, and might give employment to two hundred Scots farmers, who would treble its rents, and vastly increase its produce. The accounts which I have from the north of Ireland are pretty good; but, in the south, they have suffered severely from a want of rain.'

NOTICES TO CORRESPONDENTS.

Mr LAWRIE's *Reply* to the Strictures of 'A Constant Reader,' shall appear in next Number; together with Mr CAMPBELL's *Experiments*, and some ingenious Remarks upon Scottish Firs.

Various communications *concerning the best Form of a Leaf*, are received, and will not be neglected. The subject is of importance, and deserves the fullest consideration.

The Sixth Report of the Commissioners for making and maintaining the CALEDONIAN CANAL, shall be attended to. It was too late in reaching us to appear at this time.

The Essex Report, and various other articles of intelligence, were too late in reaching us.

No. XL. will be Published on Monday, the 11th of December.

ERRATA IN THIS NUMBER.

P. 317. 6th line from top, dele the word *was*.

P. 391. 15th line from top, dele the word *required*, and substitute the words *did not require*, in its place.

D. Willison, Printer, Edinburgh.